

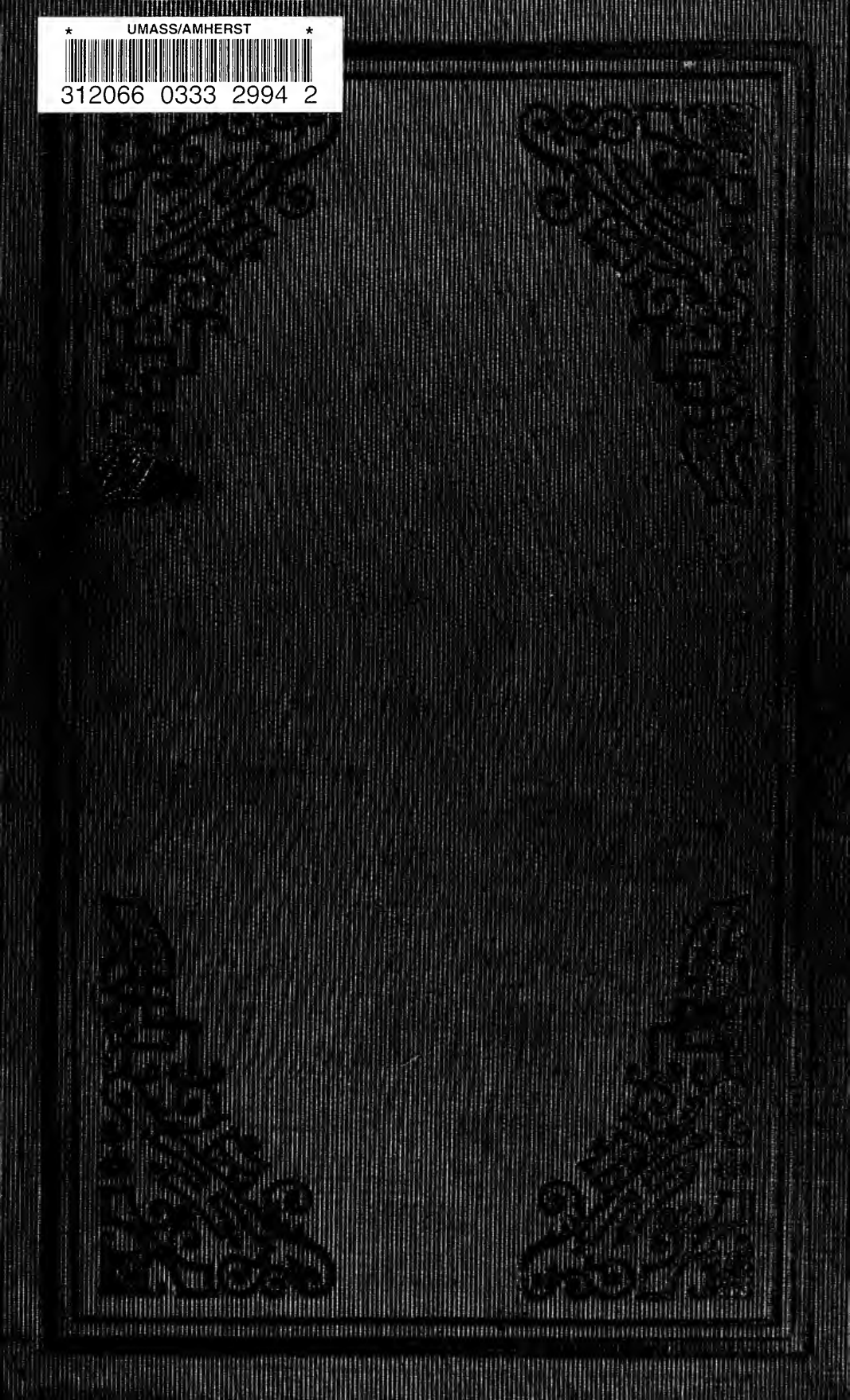
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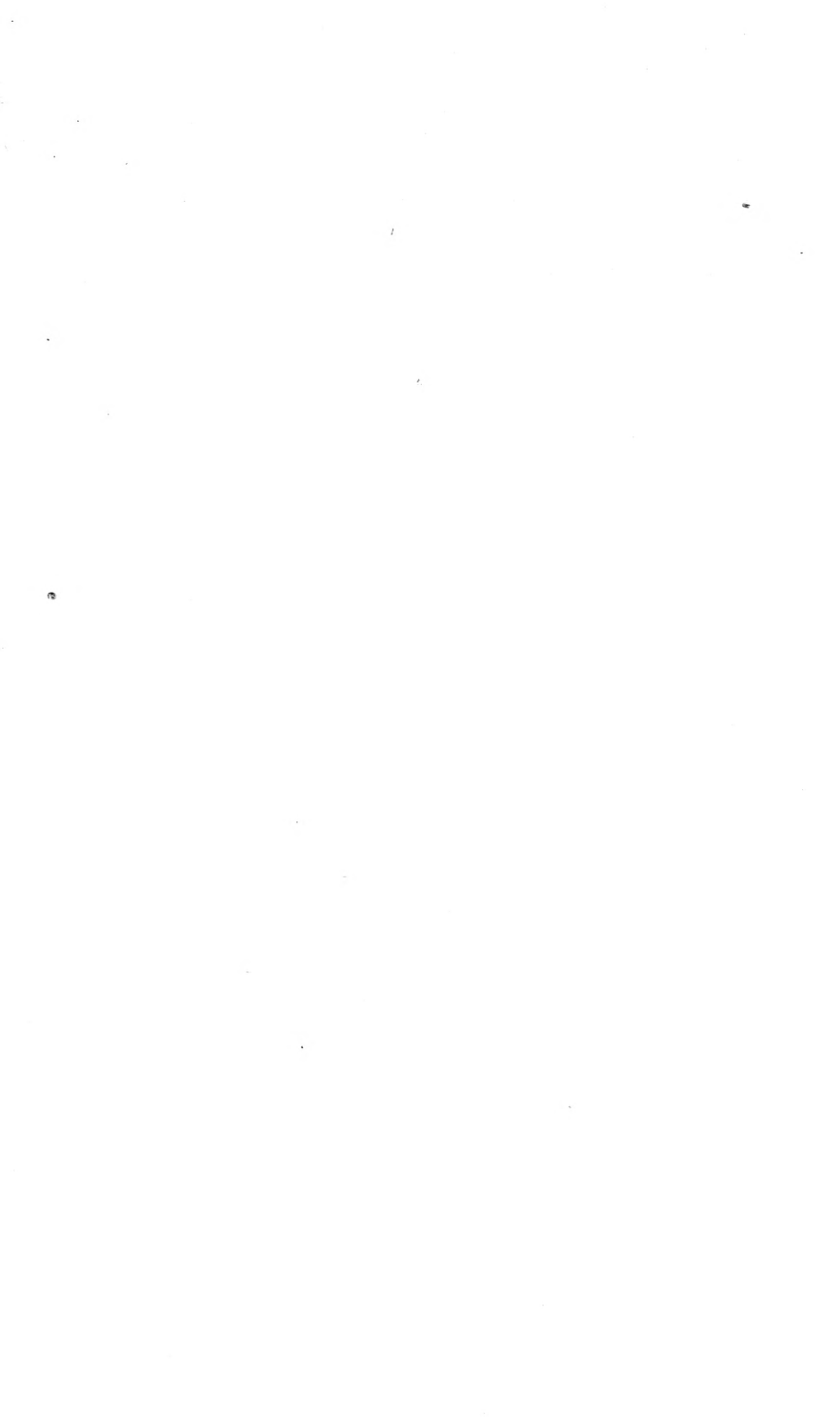
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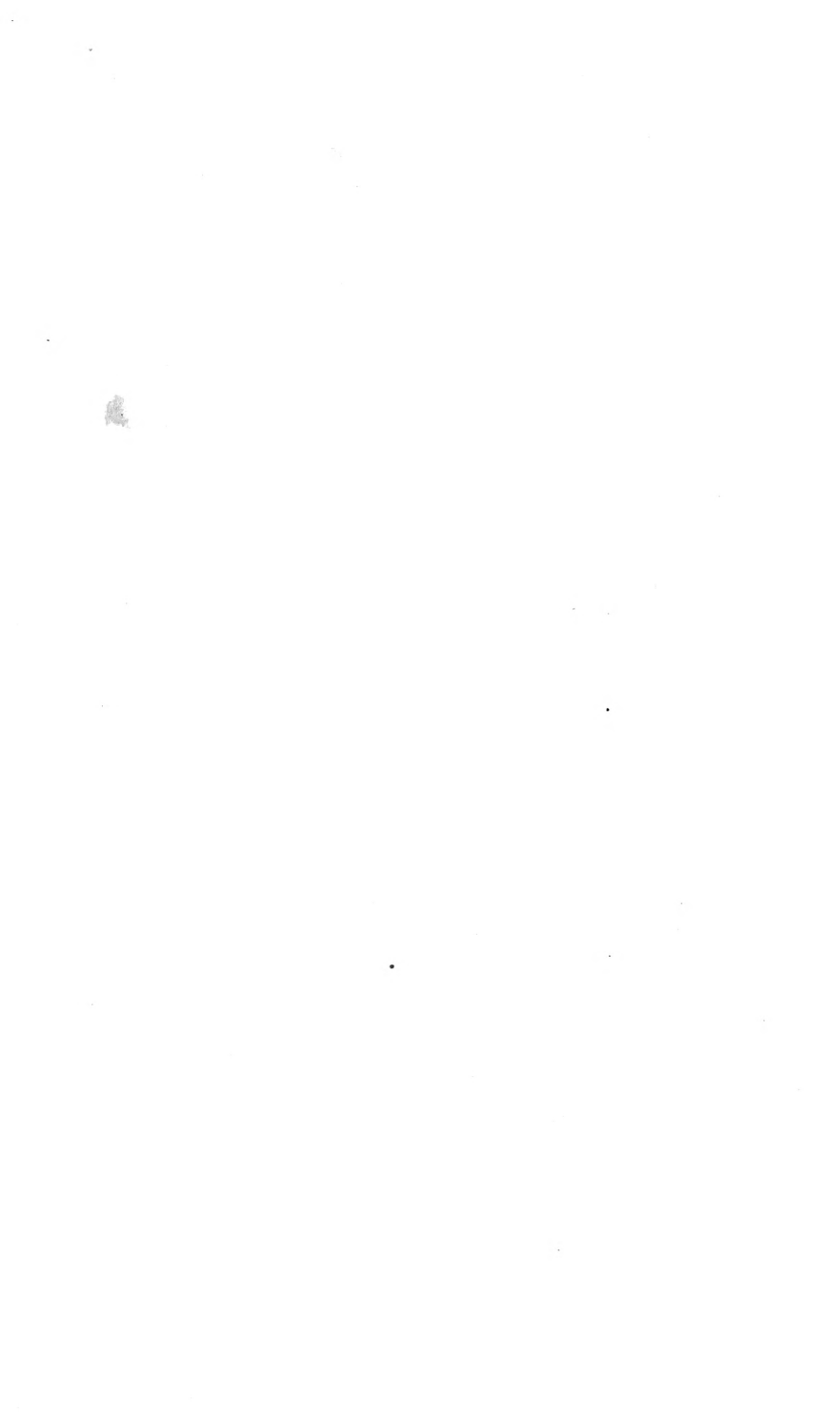
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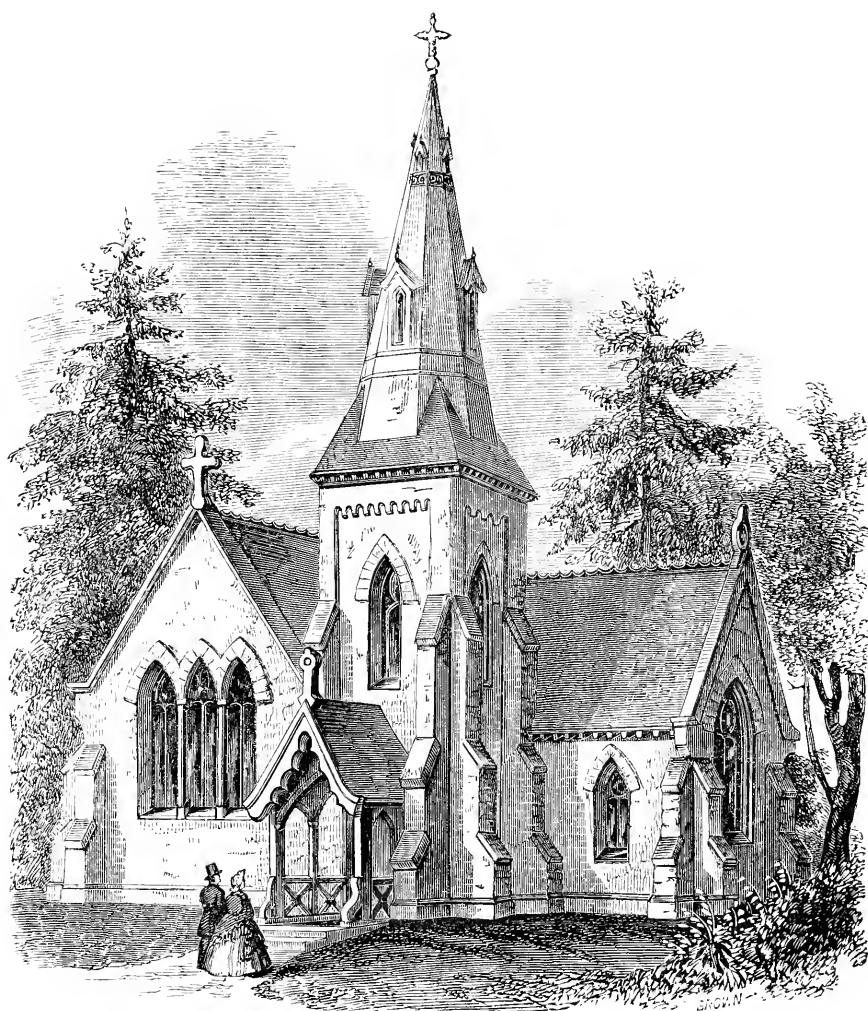






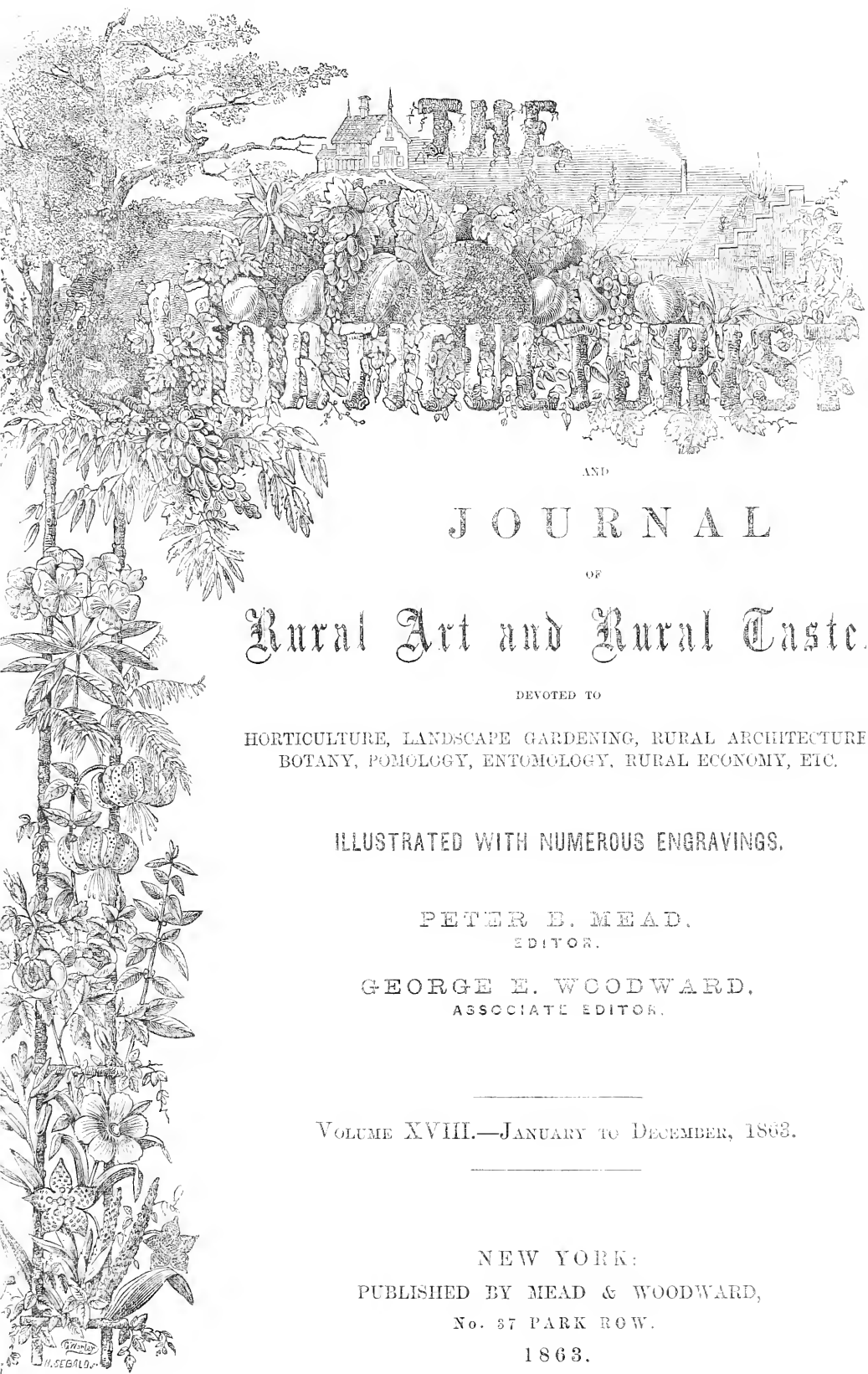






DESIGN FOR A RURAL STONE CHURCH.

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THE  
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OF  
Rural Art and Rural Taste.

DEVOTED TO  
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BOTANY, POMOLOGY, ENTOMOLOGY, RURAL ECONOMY, ETC.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

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THE  
HORTICULTURIST.

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*Hints on Grape Culture.*—XXII.

THE operation that next requires our attention is the pruning of the vine at the close of the third season. At the end of the portion of the arms already formed we have two long canes for the continuation of the arms; then we have on each side three shorter upright canes that were pinched in during August; next, in the middle, two canes that were allowed to grow without stopping. This is the present condition of the vine, and we purpose pruning it. Let us first provide for the completion of the arms. The end canes have grown very stout, and there is no difficulty in the way now of making the arms of their full length. Having bent down the canes to ascertain the length, cut the ends off accordingly. The ends of the arms, however, must not reach quite to the trunk of the next vine, since the end shoots would then interfere with each other. A space of from six to twelve inches must be left between the ends of the arms; in other words, the end of each arm must be kept from three to six inches from the trunk of the next vine. The space will vary according to circumstances, such as the interval between buds, etc. The last bud, in short-jointed vines, must be on the upper side of the arm. If the piece of wood at the end of that portion of the arm first formed was not trimmed off in June, as directed, it

should be now, though it can not be as well and neatly done as then. The stump should be cut off close to the new wood.

Next let us take the three upright canes on each side. There are several modes in which these may be pruned; but we propose to carry out one system at a time. Cut these upright canes, therefore, one inch above the third bud, counting the base bud as one. The cut must slope on the side opposite the bud. Next cut the two middle canes to a single bud each, and the pruning is complete. The vines may now be laid down and covered, where winter protection is deemed necessary or advisable. We have already stated that the natural soil is the best covering the vine can have; and a couple of inches will be quite sufficient. Cedar brush and leaves from the woods also make a good covering; very much better, indeed, than straw, which mice love to harbor in. It will be necessary to peg the vines down, to retain them in their recumbent position.

The bearing canes above have been pruned to a long spur of three buds. The reason for this is, briefly, that either the second, third, or fourth bud will produce larger and better fruit than the first. The second bud will produce much better fruit than the first; but as the result of almost numberless experi

ments, we prefer the third. Besides, a long spur leaves us a reserve in case of accident. If one, or even two buds should in any manner be destroyed during the winter, we have something to fall back on. This is a matter of no little importance where the vine is exposed to as many vicissitudes as it is in the vineyard. At all events, cutting to a single bud is a practice that we abandoned years ago, and we never expect to resume it; if for no other reason, because in time it weakens the vine almost incurably. Nothing sooner tends to wear out a vine than persistent close pruning. Some may object that the spur will increase too rapidly; but this objection is without point; for it will hereafter be seen that the spur increases no faster than when we cut to a single bud.

We may here add a few words on the propriety of fall plowing the vineyard. In a stiff

soil, it may be done with benefit, provided the plowing is shallow, so as not to effect any unnecessary disturbance of the roots; the less they are disturbed, the better for the young vine. We have never seen any good result from cutting up the roots of plants in a young vineyard; we have, however, seen many evils follow the practice. The effects produced by root pruning old and established vines will be considered elsewhere. For the present we desire the reader to disturb the roots of his vines just as little as he can, or he may defeat our purpose as well as his own, the establishment of a thrifty and productive young vineyard. If the soil is light and sandy, fall plowing should be omitted. Such a soil, however, may with advantage be covered with leaves. All soils, indeed, except such as are already rich in vegetable matter, may receive such a covering with marked benefit.

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## LANDSCAPE ADORNMENT, No. XXVIII.—TRACING CURVED LINES.

BY GEORGE E. WOODWARD,

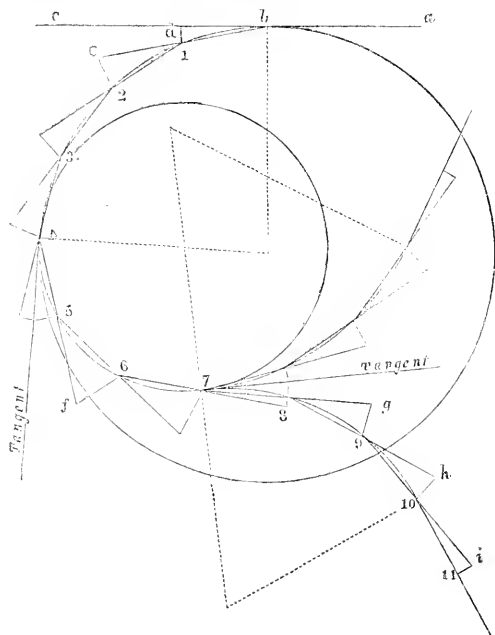
Civil and Landscape Engineer, 37 Park Row, New York.

THE practical field operations necessary in tracing curved lines for roads, walks, or other purposes, require a knowledge of the principles of curvature, that one may mould the easy flowing line to suit any formation of surface, and do it in a rapid and skillful manner, that carries with it its own proof of accuracy and beauty. The old practice of laying out curved lines by the eye is being generally discarded in first-class work, as a subterfuge of the pretentious practitioner, who is blissfully ignorant of both the principles and the practice of Landscape Art, and who apologizes for his system by this well-worn excuse, "that which is to please the eye must be laid out by the eye," forgetting the fact, that one of highly cultivated tastes naturally rejects such work as is not governed by rules of art, and will not accept the work of an inferior mind.

Aside from the meaningless results of this eye work or guess work, there are other reasons why it should be discarded. It requires

a vast deal of labor and time, and one or two revisions with a fresh eye before it gives apparent satisfaction; the undulations of surface deceive the eye; and it can not be used among obstructions, as a thick undergrowth of shrubbery, close fences, &c., with any degree of accuracy. Among our best professional landscape artists, the system of laying out curves by deflection distances meets with the most success and favor, and is equally satisfactory to the one who executes and the one who is to appreciate. This method is rapid, reliable, and strictly beautiful in its results; it demonstrates the fact that the eye can not be trusted, as what is known to be accurate appears in some cases not to be so, owing to undulations, shadows, &c., thus showing that some principle is necessary to trace a true line on irregular ground, that shall be the same true line on a finished grade. There is also afforded the opportunity of running continuous lines through all ordinary obstructions, and any fair mathematician can easily

supply the auxiliary lines necessary to locate a *line of motion* through or over obstructions of an extraordinary character. It is not necessary, in a series of papers like these, to give an analytical mathematical demonstration of the problems, but merely a general explanation of the principles involved.



$a, b, c$ , being a tangent or straight line, from the point  $b$  we proceed to lay out a curved line; 5 feet from  $b$ , at  $d$ , lay off the distance 6 inches, and set the stake at 1, 5 feet from  $b$ , and 6 inches from  $d$ . Then from  $b$  through 1 produce the straight line to  $e$ ; 5 feet from station 1 lay off the deflection distance 12 inches, and set the stake 2 5 feet from 1, and 12 inches from  $e$ . Then repeat the same operation, setting stakes 3 and 4, all of which will be found to be in the arc of a circle. If the wish is to pass into a tangent or straight line, the next distance will be but 6 inches, or the first and last distances in running from and on to a tangent are always half the others, and are usually called tangential distances. To sharpen the curve, lay off in the same direction from the tangent already found on the first curve, any tangential dis-

tance greater than 6 inches, which in this case we make 9 inches, and set stake No. 5. Then produce the straight line from stake 4 through stake 5 to  $f$ , and lay off the deflection distance 18 inches to stake 6. Set stake 7 in the same manner; then run on to a tangent by setting off  $\frac{1}{2}$  the deflection distance at station 8, and producing a straight line

from stake No. 7. At station 7 we reverse the curve. From the tangent of the curve just run, lay off, on the opposite side, the tangential distance 6 inches, and set station 8; then produce the line from 7 through 8 to  $g$ , and lay off the deflection distance 12 inches from  $g$ , and set station 9; then produce the line from 8 through 9 to  $h$ , and lay off 12 inches to station 10; then produce the line from 9 through 10 to  $i$ , and lay off the tangential distance 6 inches, and set stake 11. The line from 10 through 11, and continued, is the tangent from which, at any point on either side, curves can be laid out. All the stations are equidistant. Each curve begins and ends on a tangent. Where a curve compounds or reverses, the tangent is common to both. A tangent or straight line may be introduced between curves running in an opposite or similar

direction, but curves running one way should join each other. It is bad taste to put a tangent between them, if there is any way to avoid it. A tangent between reverse curves improves their appearance.

This principle of tracing curves is very simple and rapid, and requires no revision to ascertain if they flow gracefully and correctly. There is no necessity for clearing the ground, removing fences or other obstructions, as the line can be continued whenever two stakes can be seen. Mathematically speaking, there is a very slight difference to be detected in demonstrating this problem. In practice, however, this trivial difference can hardly be said to cause any departure from absolute accuracy. We merely mention this lest some hypercritical theorist might think he had discovered something.

An expert, familiar with this process, has a wonderful facility in executing work, while those who work by the eye only will remain in the background. He does at once what they spend hours or days to attain, as the same harmony and grace of line is the object of both.

A measuring tape and rule, and a plumb line, or a couple of light thin rods, are all the instruments necessary to do the work. It requires considerable practice to select the proper curve at first, but one or two trials will give the right deflection distances. Trial lines of this kind, we find, enable us to ascertain in the easiest and quickest manner the proper radius of a curve, without the necessity of making an instrumental survey. As a matter of economy and beauty, this system

recommends itself strongly; and in a very extensive professional practice we have found its merits above all others.

[The manner of laying off curved lines by deflection distances is so well illustrated by the engraving, that the reader can hardly fail to comprehend it. It is a sure and rapid method of laying out drives and walks, and leaves no doubt on the mind as to the result. We have before now used a marked pole, but a cord or tape line accomplishes the work with more ease and rapidity. There are some circumstances, under which this method of laying off a curved line will be found to possess peculiar advantages; Mr. Woodward rates it none too highly. Like most other things, it requires practice.—Ed.]

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## THE KITCHEN GARDEN.

BY BROOKLYN.

MR. EDITOR,—What size do you think the above should be “for a private family?” I know properly made and kept ones are rarer than good graperies, but thought I had some idea of what it ought to be, and the extent necessary. Judging by the catalogue of one of our best seedsmen, I must be very much mistaken.

Taking amount of seed in one of their *small* No. 1 assortments, according to Bridgeman, I find it will plant three and a half acres; adding for walks and allowing for double cropping, it would certainly be ample for a highly cultivated garden of two acres, Pumpkins and Potatoes excluded, and no allowance for permanent beds, Asparagus, &c.

This small arrangement embraces six thousand Cabbage, one thousand Cauliflower, five hundred Egg, seven hundred Leek, twenty-five hundred Celery, eight thousand Lettuce, and two thousand Tomato plants, one hundred and fifty hills Cucumber, one hundred and twenty Melon, one hundred Squash, a quarter of an acre Corn, and various amounts of from one to twenty-six rods of other things.

A large (Shaker?) family, according to No. 4 assortment, is expected to require one thousand feet row of bush and two hundred hills pole Kidney Beans, two hundred hills Limas, twenty-six thousand Cabbage, &c., ten thousand Celery, three thousand Egg, five thousand Endive, three thousand Leek, twenty-five thousand Lettuce, two thousand Pepper, and eight thousand Tomato plants, four hundred hills each Cucumber, Melon and Squash. Two thousand feet row of Peas, and one and a half rods of Parsley. This assortment will plant twelve acres, requiring say a nice square *Kitchen Garden of Eight Acres*. (Farm of four acres, hide your diminished head!) Would you not like to see such a one, Mr. Editor?

We can not, of course, expect seedsmen to advocate thin sowing, but there is “reason in roasting of eggs.”

Think a “revised and abridged” edition of seed list is needed; if *paper* were substituted for ounces, ounces for quarter-pounds, and half-pints for quarts, it would be nearer the requirements of “private families,” and the capacity of their gardens.



In connection I beg to offer some remarks upon

SUBURBAN GARDENS,

and what to raise in them.

Many, in fact the majority of these, are not cropped in a manner that produces the amount of pleasure and profit they are capable of doing. It is ridiculous to fill up a small, valuable garden with coarse stuff, Beets, Carrots, &c., which can be got about as good from your butcher or grocer. Unless of unusual size, the aim should be, *to raise only what it is impossible to buy in perfection.*

First, Berries and soft Fruits. Second, Salads. Third, Summer Vegetables.

The following is the order in which I think articles stand in desirability; each one can go as far down the list as his ground will carry him, begging him, however, to allow enough for an *ample* supply of fruit, before he goes into the vegetable business at all:

Blackberry, Strawberry, Raspberry, Currant, Gooseberry, Grape, Dwarf Cherry, Peach, Apricot, Nectarine, and Plum, if willing to pay them extra attention; if not, do not plant; Melon, Tomato, Cucumber, Lettuce, &c., Pea, Bean, Sweet Corn, Sea Kale, Okra, Asparagus, Rhubarb, Egg Plant, Celery, Spinach, Cauliflower, Summer Cabbage, Summer Squash. If any ground is left, after providing for the above, should recommend *early* Dwarf Pears.

One word upon the use of these good things. Ripe fruit is of course always acceptable and wholesome, but the time of all others to eat it is in the morning, before or at breakfast.

How is it that so few in our country use it thus?

Salads, also, are very acceptable at the morning meal, and but little used. If this food took the place of greasy pan dishes and chemical cakes, we should hear less about dyspepsia, &c.

[A "private family" is an institution of very uncertain dimensions. Some private families consist of three or four individuals; others of twenty or more, including servants.

We have not one of Mr. Bridgeman's Catalogues at hand; but we presume he gives the number of seed in each paper of given dimensions. If all the seed were planted, and each one grew, of course there would be a surplus of plants; but all the seed will not grow, because, even when grown and gathered with the utmost care, there will be many imperfect ones. Then, too, one gardener will make a package of seed go twice as far as another. The price of this No. 1 package is \$5; and if it will plant three and a half acres, no fault can be found with the price. Many seeds require to be planted thick, and afterwards thinned out; of such as are transplanted, some die. For these and other contingencies the seedsman allows a pretty good margin; for he reasons that the planter should have too many rather than too few seeds. Then, again, it is a custom among seedsmen not to sell less than a five cent paper of seed. To put up papers half the size of these would treble the cost to the consumer. Such kinds as are left over will usually be good the next season. These and similar arguments can be legitimately used by the seedsman; but, notwithstanding, there can be no doubt that, used economically, a No. 1 package of seed can be made to meet the wants of a pretty large family.

Of some kinds, the quantity may be in excess; but of others the quantity is by no means too large. There are few families that will not need a pint of Lima Beans, a pint of Corn, as many Snap Beans, &c. In looking over the list, we find we should lessen the quantity of some seeds, and increase that of others; but we have not the time, at this moment, to go into details. The figures of "Brooklyn," however, are interesting, and will probably bring out somebody else.

Suburban gardens, happily, are on the increase. We agree with "Brooklyn," that such gardens should not be filled up with coarse stuff, unless there is plenty of room for it. A fruit garden is more desirable than a vegetable garden; but the two can and should be combined. We think "Brooklyn's" fruit has got just a little mixed. We should not put Blackberries and Raspberries before

Grapes; neither should we put Cherries, &c., before Pears; but if they are all got in, we do not care much about the order of their going. Ripe fruit is undoubtedly best eaten in the morning. We eat it in the morning, but then we eat it pretty much all the time,

not stopping till we get fairly in bed, till the supply runs out. There is an old adage, probably not much known, and seldom heeded, to the effect, that apples are *gold* in the morning, *silver* at noon, and *lead* at night. Dyspeptics should "learn it by heart."—Ed.]

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## REMARKS ON THE GLADIOLUS.

BY DANIEL BARKER, HARTFORD, CONN.

AMONG the rapid strides which floriculture has made within the last few years, there is nothing more apparent than the increase of the refined taste for the delightful art of Hybridization, and the improvement of the many kinds of flowers which so richly deserve the designation of "popular," either from the ease with which they may be cultivated, or their submissiveness under the fertilizing and fostering hand of man.

Various are the genera in this our day which are brought to bear with these remarks; and infinite as are the varieties of some, and exquisitely beautiful as are many of them, there is no genus which is more eminently beautiful and richly deserving the patronage of all lovers of a garden, than the "Gladiolus." No plant is better adapted, under good treatment, to feast the eyes and delight the senses of Flora's votaries. We need not refer to the splendid specimens which have been exhibited at the various public exhibitions during the present year, or those to be met with in many public and private collections. The universality and extent to which they are grown throughout the country affords abundant evidence that they are held in high estimation by all classes.

A knowledge of their natural and tractable habits leads us to assert that very much may yet be done by skillful hands in producing varieties which will not only vie with those admirable kinds named below but which may be infinitely superior to any yet imported from Europe or raised in this country. It may be truly said, that the Gladiolus is well worthy of all the patronage it is receiving. It is likewise true, that of

the many numerous varieties annually imported and offered for sale in this country, some of them possess great merit; *others but little.*

We have watched with peculiar interest, during the present season, a large bed of new varieties; and while many of them are truly beautiful, we must at the same time admit that many of them are not worthy of being grown in the same bed with those grown some six years since.

In matters of this kind, it is always best for those who intend to become purchasers, to inspect for themselves during the blooming season the collections to which access may be had, in order to make choice of such kinds *only* as are really improvements upon the kinds already in cultivation by them.

The accompanying list is compiled for the purpose of rendering some assistance to such amateurs as may think fit to avail themselves of it.

There are doubtless many varieties equally desirable with those named; but these seemed to us to possess the greatest share of good qualities, either in profusion of bloom, form, or color of flower, compactness of growth, &c. :

Azlaie, salmon rose, shaded.

Anatole Levenneur, violet, spotted with red.

Achille, bright red, striped with white.

Berthe Rabourdin, white, spotted with carmine.

Brenchleyensis, vermilion scarlet.

Canary, light yellow, striped with rose.

Ceres, pure white and purple.

Comte de Morny, cherry red.

Duc de Malakoff, orange red, beautifully shaded.

Diane, carnation, shaded with rose.  
 El Dorado, pure yellow, fine.  
 Florian, cerese and white.  
 Hebe, carnation, striped with carmine.  
 Le Poussin, light red, beautifully shaded.  
 Leonard de Vinci, violet, striped with rose.  
 Mac Mahon, cherry orange, a very bright and beautiful variety.

Madame Leseble, pure white, blotched with rose.

Madame Vilmorin, rose, white center, striped with carmine, (extra.)

Madame de Vatry, sulphur, shaded with carmine.

Mazeppa, orange rose, striped and spotted.

Maria du Mortiere, white, striped with rose.

Neptune, fine red, spotted with carmine.

Napoleon III., bright scarlet, striped.

Ninon de L'Enelos, carnation, beautifully marked with rose.

Ophir, fine yellow, spotted with purple.

Olympe Lescuyer, orange and rose.

Princess Mathilde, light rose and carmine.

Purity, purest white, the lower petals marked with rosy violet, (extra.)

Pluton, deep scarlet, spotted with white.

Penelope, white, shaded with yellow and carmine.

Reine Victorie, very large pure white.

Raphael, deep vermilion.

Solfaterre, pure yellow, (fine.)

Veleda, rose and lilac.

[Of summer bulbs, there is none that more nearly fulfils the requirements for popular taste than the *Gladiolus*. It is in all respects a desirable plant, being easily grown in any ordinary garden soil. It blooms freely, possesses a great diversity of color, and is decidedly beautiful, especially some of those of recent introduction. If any of our readers should be so unfortunate as not to possess any of the new hybrid varieties, they should not let another season pass without adding some of them to their collection.—ED.]

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## ON THE TIME OF RIPENING OF SEVERAL KINDS OF GRAPES.

BY H. L. YOUNG, POUGHKEEPSIE, N. Y.

I GIVE you, Messrs. Editors, the following notes of my experience with regard to the above subject. In the consideration of this question in agricultural journals, where statements of this sort are made public, it is important that we should understand the nature of the soil and the exposure of the vines, as well as the simple date of the maturity of the fruit. This fact is often forgotten. A vine producing sour and immature grapes on a low, wet situation might be made to produce early and sweet fruit under other and more favorable circumstances. It is true that the treatment and the kind of manure employed are also important items; but the soil and the exposure are the principal considerations, after the choice of the variety.

My soil is a light loam, not sandy or gravelly, but rather argillaceous than otherwise, and is underlaid by rock at depths varying from one foot to four or five feet, as the case

may be. Some of the rock is a species of slate, in laminae or leaves, easily picked and broken, and some of the holes for my vines were thus picked out of slaty rock; and this broken, disintegrated mass, mixed up with fine soil and rotted manure, constituted the bed for the young vine. Other vines were set in a deep soil; and others, again, with only twelve or eighteen inches of soil on the top of a hard blue rock. The exposure is a hillside, sloping for about 200 feet somewhat steeply to the south and east. It is thus protected by its natural position, and also by a dwelling house with its surrounding trees, from cold north winds. Under such circumstances, with severe fall, and light summer pruning, and with the vines laid down and covered through the winter, I have found the different varieties cultivated to ripen according to the dates specified below. I would premise, however, that by the word *ripen*, I

do not mean simply colored and barely eatable, (many, for instance, judging the *Isabella ripe* when it has merely assumed a dark color, and while it yet has the foxy red lurking in the bunch, denoting to the experienced eye its immaturity,) but I mean actually *ripe*, and so that from a vine of sufficient age, a number of mature bunches could be picked.

The following is the table :

	1858.	1859.	1860.	1861.	1862.
N. Muscadine } —	Sep. 6	Sep. 6	Sep. 14	Sep. 12	
Grape ripe . }	—	Sep. 10	Sep. 15	Sep. 16	Sep. 21
Concord. ....	—	—	Oct. 1	Sep. 27	Oct. 6
Rebecca. ....	—	—	Sep. 26	Oct. 1	Sep. 27
Diana. ....	—	—	Sep. 26	Oct. 1	Sep. 27
Isabella. ....	Sep. 20	Sep. 26	Sep. 23	Oct. 2	Oct. 13
Catawba. ....	—	—	—	Oct. 10	Oct. 16
Anna. ....	—	—	—	Oct. 15	Oct. 20
Montgomery. —	—	—	—	—	ab't Oct. 6
Bl'k Hamb'gh }	—	—	—	unripe	unripe
(out of doors) }	—	—	—	unripe	unripe
Delaware. ....	—	—	Sep. 23	Sep. 16	Oct. 6

This list does not indicate the quality of the grape, or the desirableness of any particular variety for cultivation. I will, however, append an abstract from my Journal with regard to the product and condition of the vines under date of October 6th, this year, (1862.) It will be remembered that the season just past has been generally very unfavorable to the grape. During the summer we had (at least in this region) very wet weather; showers were frequent and very copious, and the nights often cold and damp; there was very little of that dry, hot weather, which favors the maturity of the grape. The extract is as follows :

1862, Oct. 6th. The Northern Muscadine, sweet and fine, but the berries apt to drop somewhat from the bunch when it is plucked.

The Concord is in perfection, and very fine; a few berries here and there mildewed, but not so as to cause any appreciable loss. The foliage is perfect.

Rebecca, ripe and good; growth of vine feeble; foliage a little mildewed. (A moderate bearer.)

Delawares coloring, but those that are apparently ripe are not sweet and sugary, as last year; foliage very much impaired on portions of the vines.

Dianas are ripe, but with many green

grapes on the bunch; some bunches and parts of bunches lost from mildew.

Montgomery (a green grape resembling the Chasselas, and bearing showy bunches of huge proportions,) ripe, but the berries not uniformly matured; occasionally sour ones are tasted; the juice of the best ones watery and not high flavored; foliage injured.

Isabellas, not yet mature; only occasionally a sweet, well-flavored berry to be found. Two young vines are the most forward; the foliage on these fair; on most of the other *Isabella* vines the leaves have mildewed, and on the tops of the trellises the branches are bare.

Catawba, an almost entire failure. I have a few grapes on some young vines, hardly fully ripe, however.

Anna, still hard and unripe.

I would remark, that the Concord varied very much in this vicinity. My own crop, and also that of the Messrs. Carpenter, who have a vineyard in the southern part of this town, and who marketed over a thousand pounds of this variety, were both good, free from mildew, with many bunches of unusual size and beauty, and of a delicious flavor.

With several others, one a large grower, Mr. Woolley, on the opposite side of the Hudson from us, the crop was a failure, from the rot or mildew of the berries, which took place during the month of July. I might observe here, that Mr. Woolley's soil is a deep, coarse gravel, very favorable for drainage. Looking at the situation and appearance of the vines in several places where the mildew or rot prevailed most extensively, and comparing the condition of things there with what I observed elsewhere where the crop had not blighted, I should judge that one, if not the chief and only cause of the disease, was the crowding of the vines, placing them and the trellises too close together, thus preventing the circulation of the air, and the entrance of the sunshine to dry the soil, saturated with moisture from the frequent rains. In a very dry season this close arrangement of the vines might not result in ill, but in a wet season the case is different; the rain then causes a vigorous and redundant growth,

which of itself is apt to make too dense a shade. The Concord, the foliage of which does not drop from mildew, seems above all other grapes to demand a free circulation of air and an open growth of the branches. While the grape needs a sheltered situation, that is, one shielded from cold winds, it is not to be implied that it requires a confined one; on the contrary, it must have an airy as well as a sunny site. The fruit itself does not need the direct rays of the sun; in fact, it is better when shaded by leaves; but that does not mean that it should be secluded from the air by a dense overhanging foliage; this undoubtedly creates mildew.

You will observe, by my tabular statement, the lateness of the ripening of the Isabella. Of my crop of over 400 pounds, hardly a hundred attained a good degree of maturity. As to the crop in this town and neighborhood, it was a decided failure; and many thousand pounds not ripe enough for market, (and to my notion this implies a pretty green condition of the fruit,) were manufactured into a wine which may be supposed to be palatable. This variety, promising abundantly early in the season, was delayed in its ripening by the cold, damp summer; and towards the close of it, mildew affected the leaves to such an extent that nearly all of them dropped off, leaving the fruit, in many cases, naked on the branches; those who had trimmed during the summer most scientifically, according to the books, allowing only two or three leaves to grow on a bearing branch beyond the last or outside bunch, were worse off than some of their neighbors less theoretically skillful. Where the vines had thus been cut short, the few remaining leaves, having mildewed and fallen off, there were none left to keep up the proper elaboration of the sap, and no fruit ripened; where, from negligence or a different system of summer management, there had been left a greater abundance of leaves, especially of newer ones on the extremity of the bearing shoots, there some little fruit matured. I believe in pinching in the bearing shoots four or five or more leaves from the last bunch, and continuing to do so at intervals; and the laterals al-

so should be pinched in to one or two leaves; but I doubt the propriety, one year with another, of the severe cutting in of bearing branches after the manner of the vines trained under glass. At the fall or winter pruning is the time to shape the vine so as to allow room for the growth of wood the next summer, so that it will not make too dense a shade.

The Delaware suffered much this season from mildewed foliage, and on some vines nearly all of the leaves fell off. Of course the fruit thus left bare was inferior. Last year our Delaware grapes were much injured, as to the appearance of the bunches, by the bursting of the berries; as a consequence, the wasps and flies were at once on hand to avail themselves of this opportunity of gathering sweets, and the general appearance of the vine was far from flattering. This variety, however on the whole desirable, is thus by no means free from defects; nor, indeed, do I know of a single variety of grape which has not its peculiar liabilities to failure and loss; and where there is ground enough, (I speak of this latitude,) several varieties should be cultivated, and dependence for grapes should not be placed upon one single kind. I have now had out-door grapes on my table almost daily for over two months; and as those packed for late use are keeping well, I have the prospect of eating them for nearly a month longer. One variety alone, the Concord, I have enjoyed for two months. This kind, however, on account of its thin skin, will not bear packing for the winter as well as the Isabella. The Rebecca is a sweet, pleasant, delicate flavored sort, reminding one of a hot-house grape. The Diana is a sweet, juicy fruit; it has some of the bad characteristics of the Catawba, in that it rots or mildews readily, and is sometimes late in maturing. The bunch is so compact that the berries in ripening are pressed tightly, and often burst; this disfigures it.

The Catawba, in its highest condition, rarely attained here, I consider unexcelled in sprightliness of flavor. Its cultivation with us, is almost abandoned, on account of the frequent rotting of the berries; a good crop

can not be looked for oftener than once in three or four years. This vine particularly needs a dry and warm position; and, in fact, a dry, well-drained subsoil as an *absolute* prerequisite to the raising of fine, well-flavored grapes; no manuring or after culture in training will atone for this fundamental error at the outset. Put your grapes in the highest, warmest, and driest location you have. Although the soil may be stony, and even unfit for ordinary garden beds, you have but to loosen and manure it, and, if possible, deepen it at the spot where you set your vines, and for three or four feet around it, and the roots will soon find their support. It is true, your vine may not attain the great luxuriance found in soils naturally deeper and more moist, but you are more sure of early, well-ripened fruit; and if you mulch your vine

thus planted, it will be the better for it, and obviate, in some degree, the disadvantage of its dry position.

[In giving the results of individual experience in growing grapes, the soil, exposure, and general treatment are matters of importance. It is not to be denied, that of two persons growing grapes side by side, with the same soil and exposure, the one will succeed and the other fail. The difference in results is owing to the difference in general treatment. The reader, however, on comparing the various reports on grapes published in the HORTICULTURIST, will not fail to observe a pretty general concurrence of opinion on some points. We purpose collating them by and by.—Ed.]

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### MIGNONNETTE, (RESEDA ODORATA.)

BY THE EDITOR.

ONE of our little girl friends writes, "Do please, Mr. Mead, tell me all about Mignonnette in your next number." Well, Lizzie, we will tell you as much about Mignonnette as we think you can understand. We hope a good many other little girls (and big ones too) will see it and be interested in it.

Mignonnette belongs to the genus *Reseda*, which is so named from the medical virtues which it is supposed to possess of allaying inflammation, the primary meaning of the word being, "to appease." In this genus the perfect flower is apetalous, (without petals or corollas,) surrounded by several fringed petal-like, barren flowers, the involucre spreading and many leaved, and the stamens numerous. In the species *R. odorata*, the leaves are entire, three lobed, the calyx equaling the corolla. If you do not quite understand all this, Lizzie, you must get some good work on Botany, and study it out. You will find it deeply interesting. This genus contains several species, but the *R. odorata*, or Mignonnette, said to be a native of Barbary, is

the only one which possesses much interest, except to the botanist.

Mignonnette is a universal favorite, especially among the ladies, and is very extensively grown by the florist on account of its fragrance. This fragrance is exceedingly grateful, but very peculiar, and can be likened to nothing but itself. You can compare the odor of most flowers to something with which you are familiar, but this sets all attempts of the kind at defiance; and thus it may be said to possess a fragrance peculiarly its own. The fragrance of the flower of the grape vine bears the nearest resemblance to it.

The florist uses Mignonnette extensively in bouquets to add to their sweetness, and most ladies would consider a bouquet imperfect without it. Though highly esteemed by the ladies, they are not the only ones who have spoken its praises. The poet and novelist have made very free use of its name; and if with the one it has served to give grace to a smooth running line, so with the other it has lent its fragrance to many a well-rounded

period. The flower is by no means remarkable for its beauty, and its popularity must be ascribed alone to its grateful fragrance. Thus we see, Lizzie, that though this plant is very humble and unpretending in its dress, the bountiful Giver of all good things has endowed it with a sweetness which makes it loved by all. This teaches a lesson in life which we hope you and others will not fail to heed and apply.

Mignonnette is an annual, but it may be made perennial by growing it in a green-house or in a room, and adopting a proper system of pruning and potting. "It may be propagated by cuttings, which root readily." Those are the words we made use of fifteen years ago in an article published in the *Miscellany*; yet the fact, taken from a late number of the *English Gardener's Chronicle*, has been going the rounds of the papers as something novel and interesting. Interesting it certainly is, but it was not new to us, even fifteen years ago. In our love of experimenting, we had struck cuttings from most annuals before we were fairly in our teens; and that, Lizzie, to the best of our recollection, is more than twenty years ago. We have several times stated in the *HORTICULTURIST* that annuals may be increased by cuttings; but facts, you see, are not worth much to some people until they have made the fashionable passage of the Atlantic. We will tell you more about the cuttings some other time, Lizzie. At present we will tell you how to grow Mignonnette from seed, which may be bought of the seedsman at any season of the year. Take a common flower pot or a shallow box, and fill it with light, sandy loam. Make drills about an eighth of an inch deep, and an inch apart, in which sow the seed evenly, but pretty thick, and cover it; then with a board, or the bottom of a flower pot, press the earth pretty firmly against the seed. When this is done, the earth must be watered gently, so as not to wash the seed out. Set the box in the sun,

and be careful not to let it dry up; at the same time, it must not be soddened with water. The rule is, to water as often as the soil becomes dry on the top.

When the plants are about an inch high, they must be separated, and put into pots. A good soil may be composed of sod mould, garden loam, and charcoal dust or sand, about equal parts of each. As we shall have to write you another article on this subject, we will simply say at present that you can make use of either three or five inch pots, or, better, of both. In the three inch pot put only one plant; in the five inch pot put three plants at equal distances apart in every direction. The plants must be taken up and separated without bruising the roots. The pots must have a good watering, and be placed in the shade for a few days; after which they should have as much sun and light as possible. A good place for them is on the front of the table, near the glass. The soil should be stirred occasionally with a blunt stick, and the outside of the pots kept clean. The plants in the three inch pots are to be repotted as soon as the pots become filled with roots. They may be put in five inch pots. The plants thus treated will flower sooner and more profusely than those put in the five inch pots. The flowers may be cut freely; the effect will be to make the plant more stocky. The plants in the five inch pots are not to be repotted.

The seed of Mignonnette may be sown at any time. It is well to make several sowings during the course of the year, to furnish a supply of young plants. It is easily grown in rooms when kept near the light, and may be had in bloom during the whole winter. As we have got to write more for you on this subject, Lizzie, we will stop for the present; but you must bear in mind that when we come up to see you we shall expect one of your sweetest kisses and a sprig of Mignonnette.

## DESIGNS IN RURAL ARCHITECTURE, No. XII.—A STONE COUNTRY CHURCH.

[See Frontispiece.]

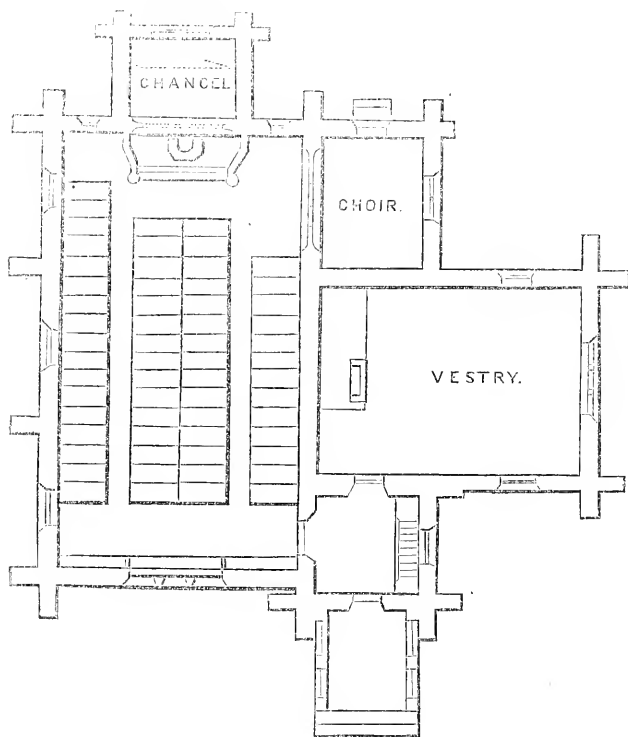
BY GEO. E. HARNEY, LYNN, MASS.

We present this month what seems to us very appropriate for the commencement of the New Year, a design for a Rural Church.

It is a simple structure in the Gothic style, designed to be constructed of rough stone taken from the quarry, and laid in the walls in its natural bed, with a darker stone

of about the same quality for the angles, copings, and window trimmings.

The *thrust* of the walls is counteracted by heavy buttresses, (which, however, together with the porch and finials, are shown in the engraving rather too heavy.) The tower is surmounted by a stone spire, and



the roofs are covered with slates in two colors, green and purple, laid in the chevron or zigzag pattern.

The entrance porch should be built in a substantial manner of pine, and painted some dark tint, to harmonize with the rest of the building. This, with the windows in the spire, and the eaves, are the only portions not constructed of stone.

Within, it consists of Vestibule, Nave, Chancel, Choir, and Vestry.

The floor of the Vestibule may be paved with brick in two colors, and the timbers of the floor above are planed and chamfered, and left to show from below, being stained and varnished, or simply oiled.

The main room contains sittings for about three hundred people; the benches to be



constructed of black walnut or oak. At the farther end, on a raised platform, are the altar and reading desk, with the chancel in the rear, separated by a high pointed arch; and at the back is a four light Gothic window, which might be made a memorial window.

The choir at the right is in an addition, separated by an oak or black walnut, or wrought iron screen, set in an arch. The vestry forms the right wing of the structure, and is entered directly from the vestibule. It may be fitted up with seats and a desk corresponding in style with the rest of the church. The roofs of this and the nave are open roofs, with the timbers planed, and stained, or oiled, and left to show from below. The truss is formed of the principal rafters connected by a collar beam, and a pointed arch in timber springing from stone corbels at the walls and terminating in the center of the collar beam.

The ceiling is to be tinted a light blue, and the walls a warm fawn color, and the windows are to be stained glass in Mosaic patterns, set in a lead quarry.

The inside finish may be either oak or black walnut, and in either case the benches, furniture, wainscoting, and roof should all correspond. The cost would be from 8,000 to 10,000 dollars.

[Mr. Harney's idea of beginning the New Year with so good a subject as a Church, is a very happy one. We think it good enough for a *Frontispiece*, and so give it the place of honor. *Rural* church architecture has received but very little attention. Perhaps we should be nearer the truth in saying, that, as a general thing, any kind of a building is thought to be good enough for a village church. How really few good structures of the kind are to be found in the country.

We are not among the advocates for extravagance in village churches; in truth, there would seem to be precious few advocates of that kind, to judge from the almost innumerable ugly looking *facts* that stare us in the face in nearly every village; we believe, however, that a very much higher order of taste might be indulged at a very inconsiderable increase of expense. We are all of us eager to build costly, if not tasteful, dwellings for our own convenience and comfort; and this is all proper enough when it can be afforded; but how few of us are willing to build a decent tabernacle for the Lord to dwell in. A very different condition of things is found in our large and wealthy cities, where costly edifices are numerous enough, not because of the deeper piety found there, but because, to a considerable extent, costly churches are fashionable. There are many villages with wealth enough to build a substantial and well-designed church, where we find only a wretched barn-like structure, weather-worn, with a mere skim of paint on it, and the surroundings in fit keeping. When the people go to worship in such a structure, we wonder that their consciences do not smite them at the doorway. We think that neatness and tidiness ought to find an abiding place where true piety dwells. There are, it is true, places where the people are too poor to build any but a very humble structure; but it may at least be neat, however humble. We can not doubt that He who is no respecter of persons will fill such an humble place with His presence more fully than a palatial church built as a resort for fashion. We have, during the past season, noted somewhat critically the condition of our rural church architecture, and purpose, at a future time, making it the subject of a series of articles.—ED.]

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## A NUT FOR FOX MEADOW.

BY WILLIAM BRIGHT, PHILADELPHIA.

I AM a friend and admirer of "Fox Meadow," and have the highest respect for his

skill as a grape-grower; but I think there is a defect in his composition for grape bor-

ders, lately presented to us in the HORTICULTURIST, which renders his method of making borders open to serious objection, and I am desirous of seeing what our Oracle can say for himself on this point.

Fox Meadow makes his grape borders of loam, sand, and leaf mould. Bones, lime-rubbish, charcoal, and manure are highly esteemed by others, but of these substances he makes little account. It is, however, chiefly to the large quantity of *leaf mould* that I make objection.

In the first place, an excess of organic matter (such as muck and leaf mould) renders the soil sour and unfavorable to the growth of many of the higher orders of plants, and with the presence of water, converts a piece of ground, otherwise good, into a marsh or morass.

Mr. Klippart, of Ohio, in his work on the Wheat Plant, p. 355, makes the following striking observations on this subject:

"The enrichment of the soil in organic matter appears to be a cause of *disease* and *death* to many plants. Clover, and many of the turnip tribe, will no longer grow on such a soil, and several species of grass quickly disappear from it."

It is a grave question to what extent we may with safety add rich organic matter to grape borders.

But leaf mould, as commonly gathered from the woods, and used by gardeners, has power to inflict other and more serious evils upon plants, especially when placed, in large quantity, near their roots. It is beyond all question a prolific and certain cause of *fungous spawn*, which is surely fatal to plant life.

The editor of the *London Gardener's Chronicle*, in a leading article on the subject, Oct. 4, 1862, declares that more than half the spotting, shanking, leaf-fading, yellowing, &c., of grape vines, are attributable to fungus growth at the roots; and he cites some remarkable instances of the death of vines and trees from this cause, in proof of his position. I quote a few passages from the article in question.

"Let the cultivator be very careful never

to dig any thing into the grape border which is sufficiently woody to produce fungous spawn. Let him *avoid leaf mould*, which has not entered into a thorough state of decomposition, so that the component parts can not be recognized; and, above all, let him abhor the bottoms of old faggot ricks, which are a very frequent cause of mischief in the conservatory."

"The fungous evil is of far wider extent than cultivators often imagine. In our gardens it not only proves destructive to trees and shrubs, but to Strawberry plants where the old stock has been dug in. In this case we are convinced it is a frequent cause of blight, and other maladies which consist in a depressed state of vitality, which does not allow the plant to arrive at perfection."

William Thomson, (gardener to the Duke of Buccleuch, Dalkeith Park, Scotland,) who has recently written very intelligently upon the subject of grape culture, cautions his readers against the free use of wood-earth, or leaf mould, in the grape border, and on this point he says:

"In every morsel of decaying wood there are *spores of fungi*, that are certain one day to destroy the vigor of the vines, and in many cases to kill them altogether."

Again, in another place, he repeats this warning:

"Leaf mould, when reduced to a black earth, may with advantage be added to any compost for vines, but never in a half decayed state, when it is certain to contain small pieces of decaying sap-wood impregnated with the spores of fungi, that frequently enter into the roots of vines, where they develop themselves, and destroy the plants suddenly during the season of rest."

The above suggestions would appear to be sufficient to induce us to reject *leaf mould* as an important component part of a permanent grape border.

Fox Meadow may reply that he meant leaf mould thoroughly decomposed. But how long a period of time would it require to decompose it, so that the microscope would fail to reveal the seeds of fungous growth, or, in fact, to destroy the spores of

fungi altogether? What process of decomposition should we adopt, and when would it be complete?

It is possible that our wise and cunning "Fox" may make some adequate defense of his much-lauded leaf mould; but, to my mind, the case looks as if it must be decided against him.

If "Fox" owns up that there is danger in leaf mould, when placed in grape borders, it will not be the first time that an eminent grape grower has fallen into an error in border making. He has certainly simplified the art very much, and has exhibited the highest degree of success in his practice; perhaps he will feel disposed to simplify still further, and discard the leaf mould.

I may now, perhaps, without undue presumption, take issue with my friend of the Reynard Meadow, on this subject, and claim that, after he has let us into the "secret" of his success, he has not given us a rule for border making better than that which I published in April, 1861. In the second edition of my work on Grape Culture, p. 89, will be found the following passage:

"For nearly two years past we have formed all our large grape borders, especially those partially outside the house, of *half good loam*, from an old but fertile pasture, and *nearly half road sand*, or fine, soft,

*rotten rock*, with the addition of a little pulverized lime rubbish from old walls and ceilings, and a little fine bone dust."

Again, page 88: "We question whether any sort of carbonaceous matter, such as rotted straw, or *leaf mould*, should be introduced into composts for the grape border in any considerable quantity."

"As to carbonaceous matter, we find that Dr. Lindley is of opinion that it exercises an influence very similar to that of rotted dung; or, in other words, that rotted dung, straw, and *leaf mould*, even when well decomposed, and converted into humus, *cause the destruction of delicate fibrous roots*, especially in the presence of moisture."

Fox Meadow must assuredly take another "Interior View" of the dynamic powers of nature, before he will discover the elements of immaculate truth, which we apprehend are "hid in the center."

[Our own views in regard to the use of muck, as well as the avoidance of decaying wood, have been so often expressed, that we are disposed for the present to leave the subject in the hands of Fox Meadow and Mr. Bright. They will no doubt give the muck a good stirring up, to the great benefit of the muck, as well as our readers. We shall be greatly pleased to have the subject thoroughly turned over.—ED.]

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## GRAPES UNDER GLASS.

BY BEAVERWYCK.

I FEEL, after reading the last article of the series on Exotic Graperies, by "Fox Meadow," in the *HORTICULTURIST*, (which, by-the-way, is admirable,) as if it was my duty to report the experience of the past two years with a cold house, and thus, if possible, aid in bringing before the public more prominently his system of constructing vine borders, which, I am convinced, time will show to be correct; and also to tell you how delighted I am with my house, which is built after your plans and specifications. It is 20 by 50 feet, double pitch, curvilinear

roof, fifteen feet high, and contains seventy vines. After visiting, the past season, a number of costly houses about me, (in Albany County,) in Western New York, Philadelphia, and Long Island, I am convinced that, for all practical purposes, my house is not excelled. It is plain and cheap, but at the same time beautiful, substantial, and convenient.

Now for the border, about which I more particularly wish to speak, because it seems to assimilate closely (though accidental) to the theory of "Fox Meadow." It is located

on a sandy slope, so that, in making, a transfer of ground from the upper to the lower side was required to produce a level, thus compelling me to fill in with new soil, which was done to the depth of three feet, with about such materials as compose "our compost." I took what was most convenient about the place, and what common sense taught me was good soil for any thing. I am isolated from old horse, dead hogs, butchers' offal, &c.; so it did not go in. After putting aside the top soil, a light, sandy loam, filled in with a sort of sandy muck from the upper edge of our bottom lands rotten shale rock from the foot of our hills, some old decayed chip manure, well mixed with sand, lots of old sods from lawn, a very little stable manure, lime, ashes, and bone-dust, mixing in as we went along the top soil before removed. Sand, it will be perceived, is prominent; in fact, three quarters of the border is of that material. I made no drainage, leaving that to the natural formation of the bottom, a sharp, clean sand. Now as to results: the vines were planted in the spring of 1861; made a very moderate growth, but ripened their wood well; cut down in the fall to from 2 to 3 feet. The past spring (1862) they broke well and set fruit finely; were allowed to bear freely, about 150 lbs., which ripened perfectly, and were delicious. The old Black Hamburg was black as ink. The

vines made a splendid growth of from 15 to 25 feet. When I say splendid, I don't mean wood like a big walking stick, with joints a foot long, covered with stains of mildew, which worm through the house like great snakes, producing for a year or two large bunches of half-ripened fruit, the vines looking as if tied together with a green cotton string, scraggily, no particular form of bunch, and then failing entirely; but short-jointed, hard wood, of a rich golden color, ripened perfectly, without spot or blemish, to the very tip of its growth; in fact, the very fruit stems ripened before cutting the fruit. The roots, I find, do not ramble, but are confined just about the base of the vine, the border being now, this fall, porous and lively, thus showing they get all they want at home. I am pleased with my house, border, and vines, and hope, Messrs. Editors, to show you next year that we can raise grapes without a mass of putrefaction at the base of our vines; and also will tell you some time how my house is made to pay 20 per cent. yearly on cost of construction, for purposes other than grapes.

[There, Fox Meadow, you have something on the other side. Between Beaverwyck and Mr. Bright we hope you will see your way clear. Thank you for your complimentary allusions. By all means tell us how you make the 20 per cent.—ED.]

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## WOMAN'S GARDENING.

BY MRS. ALICE H.

WHY may not a Lady write for the *Horticulturist*? Ladies write for other magazines, and receive applause either for the matter or manner, or because they are ladies. I claim no applause for either. Men think that the ladies like compliments, and so they do when deserved, but fulsome flattery is an insult to the sensible woman. I like to be commended for my housewifery, cleverness, and especially for my horticultural efforts, but shall be content if you will

allow me to sound my own praise. Perhaps, too, I may succeed in imparting to others of my sex a tithe of the pleasure it affords me to cultivate flowers, and fruit, and vegetables, inducing them to spend more time in the open air, and while inhaling nature's richest perfumes, breathe her health invigorating atmosphere.

My garden is not large, (about 100 feet square,) but it yields abundantly with moderate care and labor. In the spring I hire

a laborer for three or four days to dig and manure it; the planting and after care I do myself, with a boy twelve years of age, who also helps me churn the butter from two cows, and does the chores. We raise all the vegetables we need for a family of six persons, and the consumption is never stinted. We have all the approved varieties of fruit, and some to spare, and we have flowers in profusion during the whole season. I need not name the vegetables; you can imagine that we omit no good ones; and as for the flowers, we grow every thing that is pretty and attainable with a small income, and by exchanges with complaisant and admiring neighbors; but I can not forbear to name the fruits, among which are ten varieties of Dwarf Pears, six varieties of Dwarf Apples, seven Grape vines, Strawberries, Raspberries, Blackberries, Gooseberries, Currants, &c.

I ought to say something of the beauty of my garden. We keep it *clean*; weeds are tabooed; it is a great offense for one to go to seed. We can not boast of its paths, "streaking the ground with sinuous trace;" they are, unfortunately, all straight. We claim no originality for laying it out, but we are proud of its productions: *they* are perfect gems of beauty.

Now, Mr. Editor, don't figure in your own mind a dried up lady, who cares no longer for her complexion. I am still young enough to have color in my cheeks, and this is how I keep it there. Nor do I neglect my domestic duties. I keep one servant, who does the cooking, &c., and I find time to sweep, dust, mend, darn, work the butter, read the current literature, and entertain a few friends, besides going to town once a week to do the shopping for the

family. To the oft-repeated question, How do you manage to do all this? I answer, *by system*. One thing at a time, and doing that well.

I must not forget to say that I have found time to get you three new subscribers, and inclose the names and the money, which I presume will interest you quite as much as the description of my garden.

[Certainly ladies may write for the *HORTICULTURIST*. Ladies *do* write for it, though they do not always appear as such. We agree with all you say in regard to "fulsome flattery;" it is doubly weak; weak in the man who uses it, and weak in the woman who shows herself susceptible to its influence. We never bestow praise except when it is deserved, and then we do it heartily. It is a weakness of some women, however, (and men too,) to mistake mere playfulness for fulsome praise. You, of course, do not belong to that class. We can not, however, after reading the account of your garden operations, allow you the exclusive privilege of sounding your own praise. There, you see, you are trenching a little on *our* domain. We must help you a little. Some have done well, but you have excelled. We hope your example may influence scores of your sisters to go and do likewise. It would not only benefit them individually, but the human family at large, and we should hear less talk about the degeneracy of the present race. Would that we might do something, however little, to teach woman a practical love of fruits and flowers. No, we do not imagine you to be a "dried-up lady;" we know better. No woman who passes a reasonable portion of time in the garden ever can dry up.—Ed.]

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### CIRCULATION OF THE SAP.

BY M. FRYER, BRANDYWINE VILLAGE, DEL.

MR. EDITOR:—I find that the flowing of the sap is likely to become a wordy war, inasmuch as doctors can not agree in sup-

position on this knotty subject. I remember, in 1846-47, two of the ablest men in the British Isles discussed the matter up

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wards of twelve months, namely, John C. Humphrys of Dublin, and Professor Lindley of London; yet their argument failed to satisfy the public mind; consequently, they left the subject shrouded in mystery, and an open question for future generations. I admit this to be the age of science; man can arrest the lightning and make it do his bidding; yet I fear that our now-a-day philosophers can no more fathom the mystery of Nature, than the great St. Augustine could fathom the Divinity. However, it is refreshing and amusing to your readers to con over the various ideas of individuals who may imagine they will have the glory of solving this problem.

I am not an aspirant for fame; yet, with your permission, I will offer a few remarks on the circulation of the sap. If it does no good, it can do no real harm; and in so doing, I will endeavor to be guided by reason, in the hope of giving a proof of the flowing of the sap in plants, as well as in fruit and forest trees.

First, the word circulation, with regard to its signification, is taken from the *Latin* verb *circulo*, which signifies *to go about*, or *search about*. When we speak of the circulation of the blood in animal bodies, we mean the going about of the blood through all the parts of those bodies from its fountain, and returning thither again; and in these bodies, whenever that motion of the blood stops, death ensues. Just so with the leaves of trees, especially in the leaf of the Fig, we may discover the curious distribution of the sap vessels for the nourishment of every part of the leaf; and that the fine network which we observe in the leaf, is composed of vessels through which the sap circulates or passes, is very evident, if we cut any one, or all of them, the milky juice immediately showing itself, and flowing from the vessels that have been cut. A plant which shows us the flowing of the sap in the leaves, and other parts, somewhat plainer than the Fig, though the vessels lie more concealed in the leaf, is the *Garden Spurge*, which, if cut and wounded in several parts, at some distance from one another, and

thereby prevent the communication of the sap with some of the intermediate parts, these incisions in the intermediate parts, in a minute or two after cutting the principal vessels which led to them, no milk would be seen to flow from them. Another instance: cut a branch, say one or two inches in diameter, from a *Crab Apple tree*. Roast the bark a little on the stove or fire-place for the purpose of its coming clean off the woody part; you then could perceive the arteries and veins in red streaks on the wood as clearly as you could see the veins and arteries in a man's arm by tying a ligature thereon; from which it would appear that the roots are the depository of the sap in a congealed state of torpor during the winter months, liquified at the return of spring for the purpose of again performing its natural functions.

It may be well to remark, that it is the earth which affords sustenance to the roots and spongelets of trees as they yearly expand. *Oxygen*, or any other atmospheric influence, will not be sufficient to keep a *tree, shrub, or plant* alive, independent of the earth.

As a further proof. If the *pustules* of the *small-pox* be inoculated into a healthy person, it will soon show itself in several parts of the person so inoculated. And again: insert a bud of a variegated *Jesamine* into a plain *Jesamine* twelve feet above ground; the poison will reach the branches next the roots in course of time, as well as those at as great a distance above it. Inarching would have the same effect, which clearly demonstrates the sap's circulation from the roots to the further extremity of the tree, and from thence back to the roots. Light, air, and heat are material auxiliaries.

[The above, we presume, is a response to Mr. Taylor's article on the downward flow of the sap. The subject is one of much profundity, and has occupied the best minds of the age, not, however, with the most satisfactory results. On a subject like this, there is no use in expressing an opinion, without at the same time affording the

proof to support it. The rise and fall of the sap is susceptible of easy demonstration; the *modus operandi* is not so clear. We

shall be glad to have our readers discuss this very interesting point. Our opinion will be seen by and by in our "Hints."—Ed.]

## DE UVIS, ET QUIBUSDAM ALIIS.

BY EL MEDICO.

I HAD just finished the pleasant operation of trimming and training a strong one-year old Delaware, using for my model friend Mead's drawing in the November No. of the *HORTICULTURIST*, when, on entering the house, I was pleased to find the December No. lying on the table. It was well the Editor's thoughtful kindness had supplied an extra number for Master Frank; for he is so fond of pictures, especially those that appeal to the *taste*, he would soon literally "use up" mine, unless unpleasant parental authority were interposed to save it for the binder. Frank is full of wonder and delight that a gentleman who lives far away from our town, in the great city of New York, should condescend to put his name in print, write him a letter, and so thrust fame upon him. In years to come, the story will furnish a pleasant memory to father and son, should a kind Providence graciously prolong their lives and happiness. The little fellow is not only charmed with the picture of Mr. Knapp's noble quince, but he is afflicted—like his brother Tommy and his little sisters Gertrude and Eugenia—(how their hearts will flutter to see their names in print!)—with a "powerful weakness" for the *substance* thereof. In September, grandmamma sent mamma a bushel basket of splendid quinces; and the latter, who is cunning in the manipulation of fruits, made ever so much jelly and preserves. Alas! it is all now among the things that were. Mamma did not know how to say No to the sorrowful petition for "just a little more;" and papa tried, in vain, "to teach the young idea how to shoot" to the conclusion that a little mutton ought to accompany the jelly. But if these youngsters have a failing for any one thing more than another, it is for

the Delaware grape. Their complaint is a stomach that digests this rare fruit as fast as eaten. I tried to diet them on all they could eat, but the malady remained uncured, and has manifestly assumed a chronic type. I have just finished planting some 50 or 60 strong Delaware layers, (besides some other kinds,) hoping to have in future a large crop of remedies wherewithal to combat the complaint, by filling the "aching void."

Now, something about grape-grafting, without too much minuteness, which might prove tedious. But, in the first place, I beg leave to report that my successful Delaware grafts of 1861 bore this year, (1862,) a crop, not very large it is true, but quite satisfactory. Some 12 vines, in one row, matured above one bushel of very large and luscious fruit, besides giving me about 50 unusually fine layers. These vines are now in their prime, and will yield, ill-luck aside, a maximum crop next season. Here is proof positive of the value of the art of grape-grafting; a saving of two or three years of time, no little expense in border-making, besides the cost of the vine, which is not a trifle to most people, when the best are ordered. Let no one who can graft consider his old vines of inferior kinds as of no worth; for a little pains, a short period of time, and a cost trivial, if any, will convert them into the best.

My grafting last spring was done in the last days of February and the first days of March. I will give some "cases" from my note-book:

1. An old Isabella, grafted with Anna, succeeded well, making a growth of some 15 feet.

2. A similar stock with Concord, with like success.

3, 4. Do. with Delaware: both grew remarkably well, making each 30 to 40 feet growth.

5. A young wild stock with Lenoir, a success.

6, 7, 8. Wild stocks, with a new Arkansas grape, similar to the Isabella, but believed superior; all succeeded, making an average growth of 25 to 30 feet.

Of others, some succeeded; but, as usual with me, about one-third failed.

I will now mention what, to me, was a very singular circumstance connected with these experiments. Nearly all of the grafts put forth leaves simultaneously with the other vines of my garden; but nearly all remained stationary, with only three or four small leaves, a period of from 4 to 4½ months! Then, all of a sudden, those that did not die outright, sprang into the most vigorous and luxuriant growth! This fact seems to me, at least, so strange and incredible, that I hesitate somewhat to mention it. Several friends, however, witnessed it; and apparently with as much surprise as I did. Some of the grafts I had totally despaired of, and ceased to visit them, when, on casually returning, I found they had grown several feet. This curious fact set me to thinking, and the result of my reflections was, that I determined to do my *next spring's* grafting *this fall*; and I have, therefore, already gone through with such part of the work as my leisure has permitted. The remainder I intend to do, in open weather, during the winter; and with what success I hope, in proper time, to acquaint the HORTICULTURIST.

"Now, was ever such folly heard of?" some of your readers may say. I justify it in this wise: As the grape seems to require a long period of time to form a callus, and lies thus in a partially dormant state, it is better that it should, if it will, spend the winter months in undergoing that process, so that when spring returns it may be prepared to begin its growth at once, and have the whole summer wherein to grow and mature its wood. We know that many kinds of grapes will throw out callus when

stored in cellars, or covered up with earth, in winter: will they not do so with equal, or greater certainty, when, as grafts, they are inserted into a healthy stock, and covered with earth to keep them from freezing, or being thrown out by the effects of frosts? The faith that is in me says the experiment is, at least, worth a trial.

In this connection I will mention a fact, which, if known, should be more extensively known, as it may be of no little value to all those who make an ordinary hot-bed, in the spring, to forward plants of any kind. A grape graft, inserted without any especial care, into a piece of thrifty root, and placed within the hot-bed, is almost sure to live, to grow promptly and vigorously, and to become a very strong plant by fall. When the weather gets warm and the sash is removed, they may be left in the bed, and need no further aid than a few sticks, or brush, to grow upon. Some Delawares, so treated by me, during the past season, bore and matured a few fine fruit. This is worthy of remembrance by *handy* farmers and others whose purses the times may threaten to collapse. The notion is not patented, and thought not to be taxed.

I have some 40 varieties of grapes, most of them, of course, on probation, like other youngsters sometimes are, whom it is not safe to trust till tried; and I will now tell you how some of them have behaved, and what I think of them for it. It may be proper to state first, that with us, in Southern Ohio, for some unknown cause, mildew and rot have seldom, if ever, been seen more widespread and destructive than during the past season.

1. *Catawba*. Leaves mildewed to some extent, and three-fourths of the fruit rotted badly. Nevertheless an old and tried friend must not be slighted for one bad act.

2. *Isabella*. Not a particle of mildew or rot: the crop abundant, and the fruit unusually good with me. Not so generally, for this grape overbore and failed to ripen well. Like the Catawba, it is, as yet, an indispensable grape.

3. *Delaware*. Two vines, out of 30 or



40, showed a little mildew on some of their leaves. The fruit, I think, was unusually large: certainly beautiful, perfect, and delicious. Take it, all and all, it seems to have no superior. I nominate Delaware for President of American grapes.

4. *Herbemont*. Equally as little mildew as the above on its leaves: bunches very large, and fully as good for the table as the Delaware. But for its being somewhat tender, it might well contest the palm with any other American grape both for the table and for wine. I have drunk its wine, at Schneike's, in Longworth's Garden of Eden; and, for the life of me, I could only decide between them, and cast my ballot, in the act of *tasting*.

5. *Diana*. The second crop from the vine: neither mildew nor rot, berries very different in size, some nearly as large as Catawba, some quite small—some ripe and some green on the same bunch. A leaden bullet for its pulp, and the hide of a rhinoceros for its skin: between the two a sweet and pleasant juice. I say this only of the fruit of my vine. Some neighbors had fruit who praised it, and objected neither to pulp nor skin. It is worthy of much indulgence and a fair trial.

6. *Anna*. No mildew, some rot: first crop, fruit very poor, a sad disappointment. I do not, however, quite despair of reformation as it grows older, and reaches years of discretion. If it continues to disappoint me I will behead it, and stick on something better.

7. *Concord*. 12 vines gave a first crop: neither mildew nor rot. It is a better grape for *quantity* than for *quality*: will suit a hungry man, whose taste is not refined enough to be easily offended. Doubtless a good market grape for the million.

8. *Coleman's White*. A good deal of mildew upon the leaves; yet, the fruit was perfect. Appears to be a shy bearer. To my taste the best American white grape I have yet seen.

9. *Segar Box*, or *Ohio*. Both leaves and fruit mildewed badly. Such fruit as ripened was very good for *foxes*, *crows*, and other

*varmint*. A man might be excused for eating it if he could present an *affidavit* to a Horticultural Society, that he was starving when he committed the crime. As it can't do worse, it may do better, so I will even spare it another year, to repent and reform.

10. *Mead's Seedling*. A very strong layer planted in the spring, bore two bunches. The only difference, perceptible to me, between it and the Catawba, is the smaller size of the fruit. More time is needed, however, to judge it correctly.

11. *Union Village*. No mildew nor rot. Worthy of praise for its size: quality mediocre, decidedly inferior to the Isabella.

12. *Roger's Hybrid No. 17*. Some mildew on the leaves: fruit large, black, and perfect. Vine very vigorous; bore for the first time. Fruit ripens a little earlier than the Union Village, is nearly as large, and, I think, superior to it.

The mildew that affected my vines disappeared when flour of sulphur was sprinkled upon the leaves. I can not say whether or not it is a veritable and reliable remedy. My single experiment with sulphur serves only to suggest the words, "Post hoc, sed non propter hoc."

The opinions on grapes, above expressed, are applicable only to those fruits as grown in my soil, climate, and locality, and tested only by my individual taste. I speak only for myself, and make no pretense to superior acumen. Some kinds that I have praised, I may find reasons hereafter to condemn; and some that I have condemned I may have to think better of with the light of the future. That I, and others, should condemn some grapes reputedly good, is sufficiently explained by differences resulting from soil, climate, locality, etc., to say nothing of differences of taste.

On my own premises is presented a striking example of this. An Isabella that stands in a large excavation, several feet deep, and from which the better surface soil has been removed, at the edge of a pavement on one side, and a blue-glass peat on the other, without manure, tillage, or any other attention than trimming, bears unfailingly, year

by year, large crops, and the very best of its kind. Some twenty-five paces off, in the garden, was a row of the same kind, in good surface soil, (a sandy loam,) well tilled, and otherwise properly cared for: these latter, so far as I know, never produced any fruit of even medium quality. The former vine stands a few feet southward of the house; the others were exposed. It may be that this single matter of exposure counterbalances all its other disadvantages, and accounts for its far superior fruit. And so it is with the Strawberry. Mr. Hovey, at Boston, declares the *Triomphe de Gand* to be no better than a turnip. Mr. Prince, at New York, describes it in such *debilitated* terms of praise, that no one would care to buy and plant it; while Mr. Knox, at Pittsburgh, declares it to be a bowshot ahead of any Strawberry known among men. Hence I would argue that every man should experiment with fruits to the extent of his opportunities; and, when he has found one that suits his soil, his climate, his palate and digestion, let him stick faithfully by it, all attacks of all its foes to the contrary notwithstanding. I have unconsciously prolonged this article to such an extent that the "*Quibusdam aliis*" must await another occasion.

[The thought that we have favorably impressed a young mind like Frank's, (for good, we trust,) is a source of the deepest gratification. To impress a young mind thus is a great and solemn privilege. We shall always love you, Frank, and hope that you, and pa, and ma, and Tommy, and Gertrude, and Eugenia may long be spared to be a joy and comfort to each other.—It is a singular fact, that children love the Delaware above all other grapes.—You are evidently meeting with increased success in grape grafting. That is as it should be.—It was rather singular that your grafts should have remained so long stationary. We have known them to remain so at times, particularly in a dry season, but not quite so long as in your case. We think you can account for it by atmospheric influences by going back a little. Your idea of grafting the vine in the fall is novel and interesting. We are inclined to believe that you will meet with some success if the graft is well covered and protected during the winter. We predict that those put in the earliest will meet with the most success. Please mark the earliest ones, and let us know how it turns out.—Thank you for the notes on grapes.—Let the "*Quibusdam aliis*" come "*ad infinitum*."—Ed.]

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### POUGHKEEPSIE HORTICULTURAL CLUB.

BY THE EDITOR.

THE fall exhibition of the Poughkeepsie Club was held on the 24th and 25th of September. The members of the Club deserve much credit for the spirit that animated them in getting up this public exhibition. To the exhibitors, also, Messrs. Marshall, Williams, Vincent, Dubois, Gifford, Young, Merritt, and their associates, much credit is due, for they did their part well. To the public of Poughkeepsie little or nothing is due, for they manifested an indifference in strong contrast with the interest shown by the good people of Newburgh in *their* Society. It is a reproach to the people of Poughkeepsie that they do not countenance and support by their presence a Society which might be made in-

strumental in giving a very high tone to the taste and character of the place, to say nothing of the good that might be done by a more general diffusion of a knowledge of horticulture. We hope Poughkeepsie will not lag behind her sister cities in this respect.

In regard to the exhibition itself, the display of fruit was large and good, especially the pears, the specimens of which were numerous, and many of them very fine. Pear culture evidently receives much attention.

Vegetables were very fairly represented, many of the specimens being well grown. There were also some good green-house plants, but our associate is of opinion that there was a great deficiency of flowers for

such a place as Poughkeepsie, and in this he is quite right. We hope deficiencies of this kind will not occur in the future. The fruit, however, was of itself sufficient to redeem some shortcomings. We hope the Club will persevere in the good work it has begun.

# REPORT ON GRAPES AT CALMDALE, NEAR LEBANON, PENN.

SOIL of a slaty gravel, with limestone foundation on the level, but most of the vineyard is on a hill-side, rising at an angle of about 30°, facing south, where there is slaty gravel with clay subsoil.

<i>Names.</i>	<i>Mildew on foliage.</i>	<i>Mildew on fruit.</i>	<i>Rot.</i>	<i>Remarks and Mildew on young Vines.</i>
Alvey,	none.	none.	no.	Slightly.
Anna,	slightly.	no.	no.	
Concord,	do	some.	more than ever before.	Considerable.
Delaware,	do	no.	no.	Worse than any other.
Diana,	some.	no.	no.	do. do.
Garrigues,	badly.	no.	badly.	
Hartford Prolific,	very little.	no.	no.	Hangs well with me.
Isabella,	badly.	no.	very little.	But did not ripen.
Mary Ann,	no.	no.	no.	Very early.
Ontario,	no.	no.	no.	A splendid grape.
Perkins,	no.	no.	no.	Too foxy for me.
Pauline,	no.	no.	no.	Too late for this latitude.
Rogers' Hybrids,	very little.	none.	no.	No. 1 and No. 15 are superb grapes. *
Taylor,	no.	very little.	do	Dare not be pruned close.
Union Village,	slightly.	no.	do	A grape of great beauty.
Mead's Seedling,	do	slightly.	fruited.	On young vine.
Creveling,	no.	no.	no.	Considerable mildew.
Cuyahoga,	badly.	bore no fruit		
Clinton,	no.	no.	no.	Decidedly the cleanest foliage.
Louisa,	no.	no.	no.	Superior to Isabella.
Le Noir,	badly.	ruined with	badly.	No use here.
Herbemont,	do	do	do	
Kingsessing,	some.	no.	slightly.	
Cassady,	very little.	no.	no.	Excellent grape here.
Clara,	badly.	some.	badly.	Foreign and tender.
N. Muscadine,	no.	no.	no.	
Logan,	some.	no.	no.	
North America,	no.	no.	no.	One of the very early and very hardy.
Blood's Black,	no.	no.	no.	Very early and of tolerably good quality.

*Respectfully submitted,*

S. MILLER.

[Still another model report, for which we thank Mr. Miller. We shall make an important use of these reports by and by. In the mean time, we would suggest to the reader to peruse and compare them carefully. There is matter of much value in them. The Mead's Seedling named above is not ours. We hope, however, it will do credit to the name. Model reports are still in order. We want all we can get.—ED.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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TO OUR READERS.—Two years ago it was proposed, as a matter of good taste, to change the form of our page into double columns. This we now do, not only as a matter of taste, but for other reasons. In view of the extraordinary rise in the value of printing paper, materials, labor, &c., we have deemed it expedient to make such changes as shall partially relieve us from the heavy additional cost of publication; and after due consideration, we have thought it best not to increase the price of the magazine, but to use smaller type, and put the same amount of reading matter on a less amount of paper. This, we doubt not, will meet the approval of all of our subscribers, since we are thus enabled to give them as much matter as heretofore for the same money. In regard to the new arrangement of the page, while it is in good taste, it is a great relief to the eye in reading. The new type selected is very neat, round and full faced, and not so small as to fatigue the eye. We think it will be found to make very pleasant reading. These changes will reduce the postage on the HORTICULTURIST to 12 cents per annum, or three cents per quarter, being an actual gain to the subscriber.

We intend that the volume for 1863 shall be better than any that has preceded it, and that all subscribers shall get much more than the value of their subscription. Our colored engravings of the Delaware grape and one of the new Strawberries or Pears, to be furnished to all subscribers, together with an original architectural design in each number, will form attractive features not to be found in any other publication, and ought

to secure for us a greatly enlarged subscription list.

MORTON'S GOLD PENS.—We have lately been using one of Morton's Gold Pens, and with much satisfaction. No pen that we have ever used glides over the paper so much "like a thing of life." Delivering the ink with great evenness and freedom, the *labor* of writing is very much reduced; and this to one who writes as much as an editor does, is a matter of no little importance. We commend these pens heartily, as being very much superior to any of the many that we have used, and advise our readers to go or send to 25 Maiden Lane, and get one. We regard Mr. Morton as a benefactor of the whole writing community.

COUNTRY LIVING AND COUNTRY THINKING.—This is a charming new work by Gail Hamilton, a *nomme de plume*. We might guess who she is; but as she has chosen not to make her name known, it is clear that she does not wish it known, and that ought to end the matter. We must thank her, however, for some most delightful reading. She is full of a practical philosophy, and yet has so much fancy, humor, freshness, and piquancy, that one class of her readers at least would fall in love with her, if it were not for that abominable Halicarnassus. She was not, it is true, very successful with her garden; but then that was not her fault; it was the fault of Halicarnassus, as she very plainly shows. What should *he* know about gardening, forsooth! We have a spite against Halicarnassus, and we don't care if he knows it. He is always in the way, spoiling something.

The essay on "Men and Women" is an admirable specimen of fine writing; full of nerve, vigor, and pathos, and withal truthful. The story of the dying young orphan girl is beautifully touching. We could wish that we knew her name, that we might impress it upon some beautiful flower, in token of our reverence for so much moral heroism.

But we can not close our notice without an extract that will interest our readers. It is taken from the essay entitled, "Summer Gone." The author gives us some pretty word-painting about wild flowers, and, *en passant*, pays the "bouquet" a "compliment" which we think is eminently deserved. Our readers know very well in what estimation we hold the practice of putting innocent flowers in strait jackets. We do not often find persons with tastes sufficiently refined or untrammelled to agree with us on this subject; but Gail Hamilton gives us such a hearty endorsement, that we should fall in love with her again, only there stands that horrible Halicarnassus. Here is the extract:

"All the knolls are studded with star-flower, but you must go down on your knees to see it, and gather with painful care, one by one, if you gather at all. I should let them be. They look pretty where they are, sprinkling the somewhat bare slope with a crystalline delicacy, and their leaves have an elaborate, clear-cut beauty; but they do not make much figure in a — must I say bouquet? O that the old English nosegay might be reinstated in its ancient dignity, and the stiff, foreign, unmeaning, wrong-meaning, cut-and-dried bouquet ousted from the throne where its presence is a perpetual usurpation! It never will be naturalized, and never is natural. We don't know how to pronounce it; we don't know how to spell it; and if any of us do happen to know, the printer doesn't, and he goes straightway and spells it wrong. Let us have the nosegay, brimful of rich old meanings, replete with associations; and reserve the foreign word for the only thing which it fits, namely, the round, stiff, hard, close-clipped, tightly-squeezed horror that comes from the hand of professional hot-house men; solid enough to

knock you down, if fired with sufficient force, and so ugly that you are divided between pity for the poor little things forced into such unnatural contiguity—divested of the green which relieved their brilliancy from the charge of gaudiness, and laced into a hideous regularity—and wrath against the man who has so misused his eyes and hands as not to be able to construct any better imitation of the viny, sprayey, feathery, airy, slender, pendulous lightness, winsomeness, and grace of nature than that artificial knob. Call that a bouquet, and with merciful hands rend off its swaddling-clothes, tone down its rainbow hues with all tints of green, from the pale tenderness that springs up on the sunny, sheltered side of the wood, to the deep luxuriance that lurks in its unsunned and unstirred heart, and make of it twenty nosegays, whose colors shall delight, and whose odors shall intoxicate; in which nosegays, as I have said, my little star-flowers would make but a poor figure. Their stems are so short, that it is difficult to group them with any effect. Their tiny faces become quite hidden behind their sturdier kinsmen. But in their own haunts they lead a quiet, noiseless life, which well repays an observer."

There, we do not think we ever said any thing more justly severe than that; and so we put "Country Living and Country Thinking" upon the shelf, among the books marked "Choice Reading." We must add, however, that Messrs. Ticknor & Fields, the publishers, have done their part most admirably.

FLEMISH BEAUTY PEARS.—The pears alluded to in our last number were grown by the Hon. Curtis Bacon, of Middletown, Conn., who will please accept our thanks for them. As we have already said, the specimens were very fine, the largest weighing eighteen ounces. Three grew on one spur, and weighed two pounds one ounce and a half. The quality was as good as any pears of the kind that we have seen.

THE ELIZABETH GRAPE.—We are indebted to Mr. Seelye, of Rochester, for specimens of the Elizabeth grape, alluded to in a former number. It is a green grape of an oval shape;

the bunch and berries are large; the skin is thin, but not tender; the flesh is crisp rather than melting; and it has a perceptible trace of the native aroma. The berries were not thoroughly ripe, and consequently not as sweet as a former sample. We should have acknowledged the receipt of this sample sooner. We may remark here that there is a necessity of dividing the flesh of grapes into at least three classes, melting, buttery, and crisp.

**LARGE NANSEMONDS.**—We are indebted to Mr. W. F. Walker, of Passaic, N. J., for a specimen of the Nansemond Sweet Potato weighing three pounds and twelve ounces. He had many others of nearly equal size, and his whole crop was large. They were grown in a light loam, rich in vegetable matter. They were from sets sent out by Mr. Murray, which we have heretofore received in admirable condition. The Nansemond is one of the best Sweet Potatoes grown.

**KNOX'S GRAPE EXHIBITION.**—Mr. Knox, we learn, held a grape exhibition at Pittsburg on his own account, and created quite a sensation. He is not in the habit of doing things by the halves, and we shall therefore expect to hear that he has gone into grapes as he has into Strawberries, by the wholesale. The kinds that he has fixed upon are the Delaware and Concord, as being best suited to his locality for a general crop.

**BROOKLYN HORTICULTURAL SOCIETY—OFFICERS FOR 1863.**—At the recent election, the following gentlemen were chosen officers for 1863. We regret to miss the name of the former efficient secretary, Mr. Miller.

*President*, J. W. Degrauw. *Vice-Presidents*, Smith J. Eastman, D. P. Barnard, W. R. Anthony, R. W. Ropes, Gordon L. Ford. *Treasurer*, J. W. Degrauw. *Corresponding Secretary*, A. S. Fuller. *Recording Secretary*, G. H. Van Wagenen. *Librarian*, S. B. Brophy. *Executive Committee*, C. B. Nichols, Geo. Hamlyn, Prof. Eaton. *Finance Committee*, Walter Park, D. P. Barnard, R. W. Ropes. *Library Committee*, A. S. Fuller, L. A. Roberts, G. H. Van Wagenen. *Premium*

*Committee*, L. A. Roberts, G. Gamgee. *Committee on Plants*, W. Davidson, G. Hamlyn, E. H. Scott. *Committee on Vegetables*, A. Chamberlain, Van Brunt Wyckoff, M. Collopy. *Inspectors of Election*, T. Cavanach, M. Collopy.

**A GOOD GLUE.**—We have been using the American Cement Glue, for mending all sorts of things, and find it an admirable article. It is manufactured by Johns & Crosley, 78 William Street, N. Y. They also manufacture an article for preserving leather, harness, &c., called "Bursa Chrisma," said to be a good thing; but they will neither sell nor give us less than 144 bottles; and that being more than we want, we are unable to give an opinion of its merits. Who retails this article?

**THE ANNUAL REGISTER.**—We are in receipt of this very useful little manual for 1863. It will compare well with any that has preceded it, and that is high praise. Mr. J. J. Thomas, the able editor, never seems at a loss for material for his annual offering to the agricultural community. A very valuable article on Insects, by Dr. Fitch, is worth many times the price of the Register, which should find a place in every family. It is published by Luther Tucker & Son, Albany, N. Y. Price, 25 cents.

The publisher of the *Gardener's Monthly* having advanced the price of that Magazine, our club rates with it will hereafter be \$3. Those who have remitted us \$2.30 and \$2.50, will please send the balance to this office.

**SICK AND WOUNDED SOLDIERS.**—There are probably few of our readers who have not friends in the army; it may be that some of them are sick or wounded. To all such the following information will be most acceptable. The Sanitary Commission are engaged in a noble work, and deserve the praise of all lovers of humanity.

#### *Directory of the Hospitals.*

The Sanitary Commission have established an office of information in regard to patients in the Hospitals of the District of Columbia, and of Frederic City, Maryland.

By a reference to books, which are corrected daily, an answer can, under ordinary circumstances, be given by return mail to the following questions:

1st. Is ——— [giving name and regiment] at present in the hospitals of the District or of Frederic City?

2d. If so, what is his proper address?

3d. What is the name of the Surgeon or Chaplain of the hospital?

4th. If not in hospital at present, has he recently been in hospital?

5th. If so, did he die in hospital, and at what date?

6th. If recently discharged from hospital, was he discharged from service?

7th. If not, what were his orders on leaving?

The Commission is prepared also to fur-

nish more specific information as to the condition of any patient in the District hospitals, within twenty-four hours after a request to do so, from an officer of any of its corresponding societies.

The office of the Directory will be open daily from 8 o'clock A. M. to 8 o'clock P. M., and accessible in urgent cases at any hour of the night.

The number of patients in these hospitals is about 25,000. If found to be practicable, the duty here undertaken locally by the Commission will be extended to include all the general hospitals in the country.

FRED. LAW OLMSTED,  
*General Secretary.*

ADAMS HOUSE, 244 F STREET,  
*Washington, D. C., November 19, 1862.*

#### CATALOGUES, ETC.

*Bateham, Hanford, & Co.*, Columbus, Ohio. Descriptive Catalogue of Fruit and Ornamental Trees and Shrubs, Grape Vines, Evergreens, Roses, Dahlias, Verbenas, &c.

*Prince & Co.*, Flushing, L. I. Select Catalogue of their unrivaled collection of Bulbous Roots, Pæonies, &c., 1862, 1863.

*S. Richardson*, Olcott, Niagara Co., N. Y. Trade List of the Wilson Garden and Nurseries, for Autumn of 1862 and Spring of 1863.

*Godfrey Zimmerman*, near Rochester, N. Y. Wholesale Price List of the Pine Hill Nursery.

Circular from the Commissioner of Agriculture of the United States on the present Agricultural, Mineral, and Manufacturing Condition and Resources of the United States.

Report on the Chemical Analysis of Grapes, submitted to Hon. Isaac Newton, Commissioner of Agriculture, by Charles M. Wetherell, Ph.D., M.D., Chemist of the Department.

*Transactions of the New York State Agricultural Society for 1861.*—Just received, and will be read carefully and noted. Col. Johnson will please accept our thanks.

#### CORRESPONDENCE.

EDITORS OF THE HORTICULTURIST:—*Gents*, I have been a subscriber to the HORTICULTURIST for several years past, and have found great pleasure in its perusal. Your articles on the culture of the vine and landscape adornment especially, are of great service to those engaged in the rural art; yet there is a subject connected with the art, pleasing above measure, which I have looked for in vain among your columns. While we are taught to improve and orna-

ment our grounds, we are somewhat left in the dark in reference to the choice and beautiful shrubs and trees with which to adorn them. Would not a series of articles giving a full description of all the new and rare shrubs and trees suitable for out door culture in our climate, be interesting to the most of your readers? I am sure it would be so to myself. It is only recently that many choice trees and shrubs have been introduced into our country from Japan and

elsewhere, of which the people in the interior know nothing, but such slight notices as are given in the April number of the HORTICULTURIST. In giving a description of trees or shrubs, let the description be full; state the nativity, the adaptation to our climate, and the kind of soil most congenial to their growth. The description of the Paulownia given by Mr. Downing in the HORTICULTURIST, vol. i., page 16, is what I like. It gives the reader all he knows on the subject in his vast experience, and gives him to understand what he may expect from the result of his labor. The subject introduced into your Journal in this way, and extended through a series of volumes, would furnish a fund of information on this pleasing branch of horticulture, not to be found in any of the publications now in print, and add greatly to the attractions of your already interesting Journal.

I will give you an instance of my perplexity on this subject just at this time. My wife has a shrub she bought several years since for a Japonica. It has been kept in the house in winter, and nursed in the open air in summer, until it has grown to the height of about four feet. The leaves are thick and glossy, serrated slightly from the point about half way to the stem. They turn yellow and drop off as new wood and leaves are produced. The new wood is smooth, of a bright green color, and the older growth is roughened with a light brown bark. Though the plant was thought to be a Japonica, no flowers have appeared, and we begin to think it is not a Japonica, but a species of *Euonymus*, but have looked in vain to find a satisfactory description of it. I have looked over seven volumes of the HORTICULTURIST, have consulted Breck, and Saxton, and others, such as I have, but can only find a few lines, saying there is a European species of *Euonymus* "with shining green leaves," classed with the evergreens, and "somewhat tender in this latitude." I send inclosed one of the largest leaves of our plant for your inspection.

I am, respectfully, etc., JOHN LUDLOW.  
Springfield, Ohio, November 18th, 1862.

[We thank you for your hearty appreciation of the HORTICULTURIST. We shall endeavor to make it still more worthy of your approbation. Your suggestions in regard to shrubs and trees are very much to the purpose, and we shall endeavor to profit by them. There has been a deficiency of such information as you call for, and it shall be our aim to supply it. While there are some of our readers who know quite as much about these trees and shrubs as we can tell them, there are many others who know little or nothing about them, and we should be doing them a good service by imparting to them such knowledge as we possess. The leaves sent are those of a Camellia, but what variety we can not say. Neither can we say precisely why it has not flowered, without knowing more about the treatment it has received. Though Camellias do not generally flower well in rooms as usually grown, still they often set buds, which you do not mention as having been the case with yours. A moist atmosphere is one of the conditions necessary to insure the blooming of the Camellia. In a room this is sought to be attained by setting the plants on a table filled with wet sand, and frequent sprinkling of the foliage. We hope to say something soon which will be of service to you in such matters.—ED.]

HORTICULTURIST:—I have not seen your dear face since August. Perhaps I did not pay much attention to you then, as the war fever was rife throughout the land. I took the fever, and left home, and the quiet pursuits of Horticulture, Sept. 1. For the first four weeks I was so busy marching, that I thought but little of you; but for the last six weeks, being sick, I have had plenty of time to read, and have often wished for your presence. A few days ago I visited the two periodical stores of this town, (8,000 inhabitants,) but could procure no Horticultural or Agricultural literature. Grapes! where are they? I saw and ate some about six weeks ago at a plantation mansion. In this town I have seen but one grape vine. No doubt there are more; but at Pittsburg and Alle-



ghany, Pa., (my home,) every yard, large enough to have a vine, has it. But I am sorry to say our people do not seem much disposed to take hold of the improved varieties.

An agent is here from Rochester, delivering trees; he seems to have done very well. I have seen some large apple and peach orchards, but they are few; none in Virginia where I was, (from Washington to Bull Run.)

Please send me *immediately*, so that I may get it before I leave for my regiment from this hospital. J. H. FOSTER, JR.

*Hagerstown, Md., Nov. 16, 1862.*

[It is a most gratifying circumstance to know that the *HORTICULTURIST* is not forgotten, even amid the terrible excitements of a civil war. In sickness, how tenderly the recollection of past loves come home to us; and how longingly we wish for the presence of some absent, but cherished friend. Thus, in the case of our correspondent, the memory of his beloved pursuit comes back with all its force and freshness, and the power of association immediately gives rise to a desire for the presence of his friend and counsellor, the *HORTICULTURIST*. So may it always be. The numbers were sent immediately. A town of 8,000 inhabitants, and no horticultural literature! Can this be so in the nineteenth century? We fear you have fallen among strange people. And only one grape vine to be seen in a town where all our best varieties may be grown in the greatest perfection! What kind of a people *can* they be there? It is more than probable that slavery has something to do with this; for we remember that a large slave-owner once told us that *he* could not raise much fruit, for his slaves stole it as they would steal eggs. Note all that you see that is interesting horticulturally, and write us again when you can get time.—ED.]

P. B. MEAD, ESQ.:—The statistics of grape culture for latitude 41° 30' north are as follows:

Delaware, Isabella, Hartford Prolific, Creveling, Concord, and Hyde's Eliza, show no mildew or rot, and ripen well their

fruit and wood. They are the only kinds worth cultivating here. Allen's Hybrid, Anna, Catawba, Diana, and To-Kalon, all mildew and rot. The Anna, To-Kalon, and American Hamburg, are worthless. Clinton, Garrigues, (a poor apology for an inferior Isabella,) Northern Muscadine, Perkins, and Rebecca are not in high favor, but not all for the same reason.

*Newburgh N. Y.*

OBSERVER.

[This will come under the head of model reports. There should, however, have been a little more detail, showing in what degree the different kinds mildew and rot, though it is really not a matter of much moment in regard to such kinds as the Garrigues, Northern Muscadine, and Perkins, for they are not worth growing. The Anna seems not to be in good favor with all at Newburgh. Mr. Miller elsewhere gives a better account of it. There is still room for model reports.—ED.]

MR. EDITOR:—Your willingness to answer questions for other subscribers, induces me to trouble you to resolve some doubts for me.

First, as to root pruning grape vines. All the German writers advise it, and it may be that my vines are now too old to practice on without serious injury. I have a friend who plowed his vineyard two years ago with a double Michigan plow, and nearly destroyed his vines by cutting off the roots. May I not be doing equal injury if I dig away the earth at the crown of my vines, and cut away all roots six inches below the surface?

Second, will you give me the name of the very best and most reliable firm in your city, who is engaged in the sale of fruit? I not only want to know a responsible house, but an efficient one; one that will attend faithfully to the business. We are considerably puzzled here. Your city dealers send us their cards and circulars, and solicit our business, giving us numerous references, frequently among politicians, lawyers, and clergymen, but very seldom to farmers and fruit growers. Now, why do

they not advertise in your Magazine, and give us references among our own class of people, that we can inquire beforehand, and know with whom we are dealing? To show you why I make this inquiry, I will cite an instance: there are three farmers of us, neighbors, who often meet and compare notes. We all raise the same kind of Isabella grapes for market; but each happens to have a different agent in New York. One selected his because he knew the cartman who received the fruit from the barge; another because his brother, living in the city, visited the family; and I because my brother-in-law assured me he was very responsible and trustworthy. Now, our grapes were all equally good, and sent to market at the same time; the first received returns at 8, 9, and 11 cents; the second at 4, 6, and 7 cents; and mine were sold at 6, 8, and 5 cents. Now, two of these agents were either above their business, or not trustworthy. I know that some city merchants have too much business, and are compelled to leave it to subordinates; others feel that selling a hundred dollars worth of grapes for a farmer is a small business. We prefer to send our produce to those who will attend to selling it, and get the best prices, and hope you will put us in the way of doing it.

ANXIOUS.

*Highland Terrace, Dec. 15, 1862.*

[We believe that the practice of cutting up the roots of vines is being abandoned in Germany. Some of the more recent French writers condemn the practice, and attribute to it much of the present diseased condition of the vine, in which we are very much disposed to agree with them. We know, however, that the practice has been abandoned by some vineyardists in France with the best results. It has been introduced into some localities here, which we think is to be regretted. That the vine, under some conditions, and to a limited extent, may be root pruned with advantage, is not to be denied; but the practice of annually destroying all the surface roots we take to be a grave error, both in theory and fact. We

shall, in its place, give this question a thorough investigation. In the mean time, we advise you to keep the Michigan plow out of your vineyard.

Your second question is one of much importance to all who raise fruit for market. A prompt, trustworthy, energetic business agent, always alive to the interests of those who employ him, is what the fruit grower needs above most [others]. We know of some such, and will advise you by mail; for, if you will excuse us, we have determined not to do the advertising of business men for nothing. Interest and duty alike should lead them to make use of our advertising columns. When they advertise, it will be time enough to give them a public commendation; but not even then unless they are worthy. We have had advertisements withdrawn from our columns for not giving a higher opinion of an article than we thought its merits deserved; but we look upon such acts more in sorrow than in anger. When it comes to pass that we can not sustain the HORTICULTURIST without bartering our honest convictions, we shall leave the editorial chair. We always give our convictions honestly, and we try to give them fairly.—Ed.]

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#### ADDRESS OF PRESIDENT WILDER.

*[Continued from page 571.]*

In regard to bearing properties, we should select those which come early into fruit, and set their fruit readily, and annually, like the Louise Bonne de Jersey and Vicar of Winkfield pears, and not like many kinds which flower freely, but do not set their fruit until the trees have attained a great age. With the apple, we should aim to produce varieties of the constitution and beauty of habit, as well as of fruit, like the Baldwin, King, and Gravenstein, and should avoid, if possible, those of an opposite character. It may be said, that many of our earliest fruits are necessarily of medium, or small size. This can be overcome. There is no general law which limits this feature. The improvement is all within the hand of man to mould them as he will. The field

of progress is endless, and it is our duty to occupy it. The same Divine Power that created the infinite species of plants and trees, also furnished them with the ability not only to perpetuate themselves, but, like the animal kingdom, under judicious treatment, to produce improved varieties.

The success which has attended the application of judicious labor, leads to the conviction that great improvement is also to be made in our methods of cultivation. What has produced this great change?—Why manifestly a better knowledge of their several characteristics, and of the best mode of cultivation. What has given the little Delaware grape a world-wide celebrity but proper cultivation? What has rendered Hovey's Seedling Strawberry so deservedly popular in the Boston market, but a knowledge of its characteristics and the right method of treatment? In the former case at Iona Island, and in the latter at Belmont, it would seem that perfection in culture had been attained.

#### THE VINE.

Of all fruits the grape is the most excellent, delicious, and salutary in its uses. It is in the vegetable kingdom, what gold is in the mineral, and man in the animal.

When Providence designs the rapid progress of any industrial art for the welfare of man, attention is suddenly turned towards it, and a new zeal and enterprize awakened in its development. Thus, in the nineteenth century, the coverings of the gold mines of California and Australia are removed, and the immense deposits of coal and fountains of oil in their bosoms are discovered, just when the age demands their use. So with the cultivation of the grape in our land, a fruit so universally and highly appreciated in the old world; yet here, it has been allowed to slumber until the necessities and the demands of progressive civilization require the vine to minister to the wants of the community.

We hail, therefore, with pleasure, the deep and general interest awakened in the culture of the grape, in the production of new varieties so well adapted to their res-

pective districts, as to indicate the near approach of that day, when "every man may sit under his own vine."

No department of the pomologist is of more importance than the vineyard. No other fruit, at the present moment, awakens so deep an interest in our country as the grape. None, I imagine, is more intimately connected with the future commerce or well being of our country. Strange, that a fruit of such antiquity and excellence should not have received more of our attention. The grape is often alluded to in the Old and New Testaments; also in the classics, whose authors wrote under its shade, and whose songs were redolent with its sweetest perfume. Thus the grape comes down to us hallowed by a thousand memories, and honored with a genealogy extending back to its primitive Eden. In the days of the Prophets, the grapes constituted one of the chief articles of food in Syria, and other orient lands, and the loss of a crop was considered as a judgment of Heaven.

How sacred and holy are the references to the vine by our Saviour. References to the vine are numberless in the Bible, in the Greek and Roman classics, in sacred and profane writings,—in festivals in honor of the vintage, in nearly all civilized nations, and in every age.

We believe that the grape is destined to become, in modern times, as it certainly was of old, one of the largest and most important of our crops. When we shall have produced varieties suited to the various latitudes of our country, appropriate for early use and late keeping, adapted for drying into raisins, for other culinary purposes, and for the manufacture of the various kinds of wine, we shall begin to realize the great value of the grape,—equal, perhaps, in its future uses to that of the apple.

It appears from the census taken at the close of the last decade, that there was an increase in the population of the States, during that period, of thirty-five per cent., in the products of the orchard, one hundred and sixty per cent., or nearly fifty per cent. more than any other product, except that of

the single article of wine, which increased nearly seven hundred and fifty per cent.

#### INFLUENCE OF RURAL ART.

Never before have we met under circumstances so well calculated to impress us with the quietude, pleasure and salutary influence of rural life. Providence constrains us to view our fertile grounds in contrast with fields drenched with blood, and our peaceful homes with the tumult of battle and the horrors of war. We cheerfully recognize our obligations to the good Government under which we live; and we would hold ourselves in readiness to sacrifice all that is most dear on the altar of her liberties. Yet we cannot refrain from a brief allusion to the beneficial and positive tendency of calling to minister to the comfort and happiness of the human race.

The influence of pomological pursuits may be classed not only as one of the most interesting and benevolent, but one of the most useful and refined employments, opening the heart to the study of nature in her most beautiful, bright, and fascinating mood. The love of the garden is the sure precursor of a higher state of civilization and refinement. Whatever pleasures may be derived from other sources, this seems to have been the criterion of taste and comfort in all past ages.

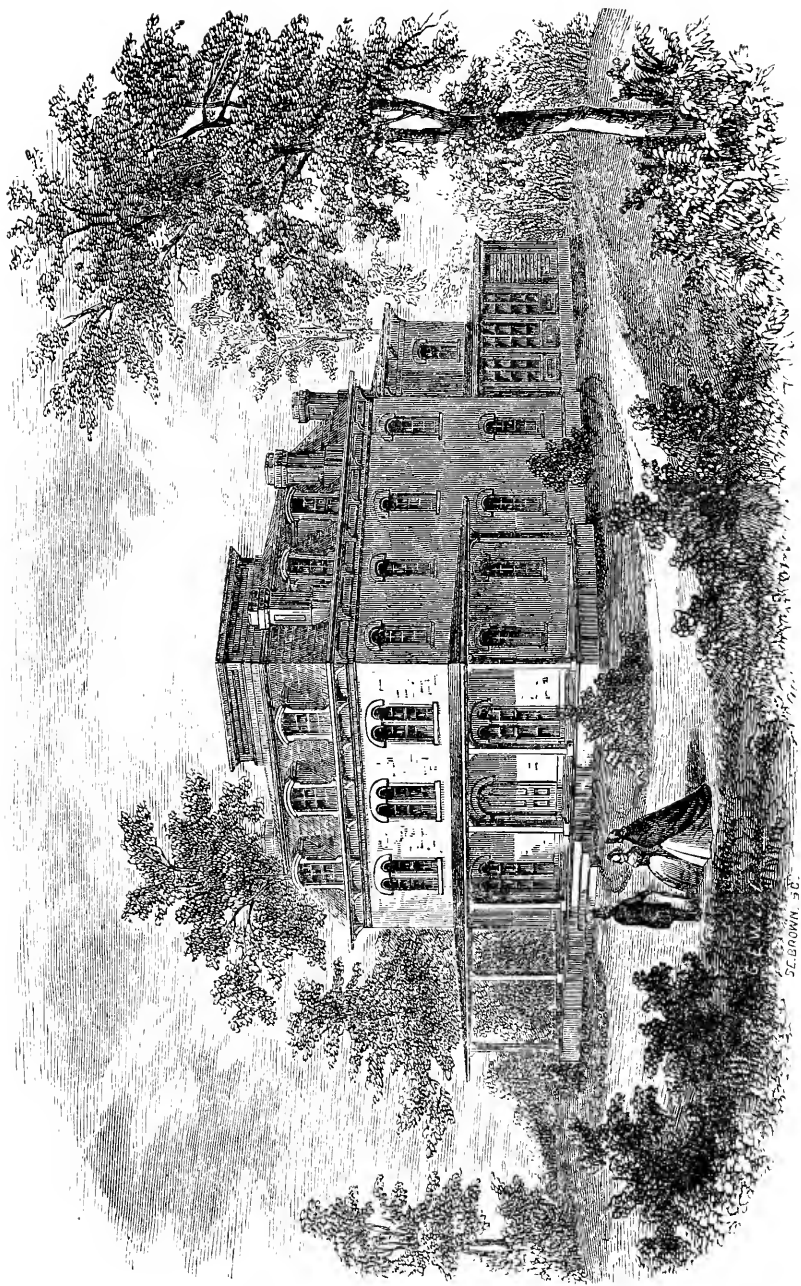
The high estimation in which fruits have been held by all nations, may be inferred by the frequent allusion to them in the Scriptures, and other branches of literature. Not only did Solomon cause the temple to be ornamented with carvings of fruits, the robes of the priests to be embroidered

with them, but he frequently alluded to them to illustrate the graces of the Church. Trees, fruits, and flowers furnish some of the most sublime representations of the Bible, the standard of all that is beautiful in imagery, of all that is excellent in character, of all that is hopeful in destiny. What a chain of exalted metaphor is seen in the Holy Volume from Genesis to Revelation, in allusion to trees; from that generated from the smallest seed, to that "which yieldeth twelve manner of fruits, and whose leaves are for the healing of the nations." The love of these is natural and instinctive, inbred in the soul of man. What an intimate communion exists between yourself and the tree which you train up in the way it should go, so that when it is old it will not depart from it.

The imagination of man has never found any other scenes so enchanting as the associations of the garden. Consecrated as the birthplace of mankind, holy as the burial-place of the Redeemer, and sanctified by intimate associations with the eternal home of the blessed, where else can we look so rationally for joyful aspirations and felicity on earth? Nor can we estimate too highly the influence of these pursuits, in multiplying and sweetening the endearments of home, and in increasing the welfare of society. You enjoy the benefit of the trees you plant while you live. Other property may be lost, but the tree lives on and blesses you with its annual crop, and when you have done with earth, it still flourishes to enrich the inheritance of your successors, and to tell them of your love to them and to your country.

[*To be continued.*]





SCULPTOR 30.

RESIDENCE OF LINLEY M. FERRIS, ESQ., Poughkeepsie, N. Y.

GEO. E. WOODWARD, Architect, No. 37 Park Row, New York.

THE  
HORTICULTURIST

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VOL. XVIII.....FEBRUARY, 1863.....NO. CC.

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Hints on Pear Culture.—II.

IN the October number of 1862 we announced our purpose to furnish a series of articles or "Hints" on Pear culture, in the same style as our "Hints on Grape Culture." We shall make no attempts at fine writing, but give in plain and simple words a description of the best modes of cultivating the Pear, according to our own experience. We may or may not present some points of novelty; that is a matter of less importance than making clear some mode of culture which will insure a certain and reasonable amount of success. We shall not stop long to discuss mooted points, but leave all such for concluding remarks, unless some real necessity shall arise for a different course. We adopt this mode of treatment, because we know the novice will learn most rapidly by having his attention fixed upon one thing at a time, and by being carried along systematically, step by step, until the full bearing tree is formed. The learner will do well to bear this in mind, and endeavor to master each operation as it is presented to him. Any thing that may happen to be obscure, we shall be ready at all times to make plain. Those already versed in Pear culture will pass these "Hints" by, or read them from motives of curiosity, or, it may be, for the purpose of criticism. They are designed for beginners.

FEBRUARY, 1863.

Our intention, at first, was to begin with the standard Pear; but, on further reflection, we have determined to begin with that best abused of all trees, the *Dwarf Pear*. There has been some discussion as to what constitutes a *Dwarf Pear*; but it presents no difficulty to our mind. Good usage determines the meaning of a word; and under this rule a Dwarf Pear is one that has been worked on the *Quince*, the effect of which is to dwarf the *habit* of the tree; and it is equally a dwarf, therefore, whether the branches start one foot or four feet from the ground; the essential habit of the tree remains the same in both cases. There is something specific, determinate, and well understood in this use of the word. A standard Pear, on the contrary, is one that is worked on a *Pear* stock. It is true that the latter, by a specific mode of treatment, may be made to assume a diminutive size, and be brought early into bearing; but we can not apply the word *dwarf* to such trees generically, because the stock is not concerned in producing this condition, as is the case with the quince; it forms an exception to a general rule. We will mention, by way of illustration, that we have brought standard pears into bearing at the third year from the bud, and at the age of ten years they were hardly 12 feet high, in

the mean time having yielded good annual crops; but we never thought of calling them dwarf pears. The term *dwarf pear* has become too intimately associated with the quince stock to admit of a change; when used by itself it must be held to apply to the quince. When we come to treat of the pear on Thorn and other stocks we shall find an adjective to meet the necessities of the case; at present we only wish to define the sense in which we use the word, and to answer some inquiries as to what a dwarf pear is.

There has been a prolonged and somewhat angry discussion as to whether the pear will succeed on the quince, much of this discussion, however, having a bearing on the *pecuniary* success of dwarf pear culture. We shall not stop long at present to discuss this question, interesting as it is. It is important, of course, that every man should, as far as possible, assure himself of the success of an enterprise before he embarks upon it; but we do not fear that our readers should take our judgment upon this matter. Looking to our own experience, and to widely extended observations under a variety of circumstances, we are led to conclude that the dwarf pear may be successfully and profitably grown in most sections of our country, provided the proper conditions are observed. We would not, however, press dwarf pear culture upon any man, either for pleasure or profit, unless he is willing to give to the subject a reasonable amount of labor and attention, especially while the trees are in a state of formation. To the amateur the dwarf pear is indispensable. Profit, to him, is a matter of secondary consideration, his chief objects being the formation of a handsome tree, the speedy production of large and beautiful fruit, growing a large number of varieties on a limited surface, and testing new kinds within a short time. This part of the subject may be treated of more fully at another time.

Let us now turn to the *soil*. The soil best adapted to the dwarf pear is a somewhat heavy, sandy loam, abounding in vegetable matter. In such a soil the greatest degree of perfection will be reached. It will also do well in a clay soil, but we doubt whether the

same degree of high flavor is attained. It may seem rather a contradiction to say that it will likewise do well in a light sandy soil; but this is so, provided such light soil abounds in vegetable matter. For instance, the dwarf pear is grown in much perfection on the light soils of Long Island, that are rich in vegetable matter, and this is the case with a large proportion of them. To use terms in their ordinary acceptation, which will be best understood by most readers, the soil for the dwarf pear should consist largely of loam, sand, and carbonaceous matter in some of its forms of muck, charcoal dust, rotten leaves, decomposed vegetable matter, etc. The proportions may be in the order in which they are named. Many soils possess more or less of these elements; where they are absent they can in most instances be added. In the garden, where the dwarf pear is mostly grown, any deficiencies in the soil can easily be added in most cases; and in many cases it is possible to amend soils even on a large scale. The nearer the soil is made to approach the conditions we have named, the more satisfactory will be the results obtained, especially in regard to the quality of the fruit. Those who have been constant readers of the *HORTICULTURIST*, can not fail to have noticed that we have frequently, during the past three years, spoken of the importance of muck to fruit culture; it is an axiom with us, and we take occasion to repeat it emphatically. We consider muck, or carbonaceous matter in some form, indispensable to the highest degree of excellence in fruit. If any body shall tell us that he can grow good fruit without carbonaceous matter in the soil, we may not deny it, but we shall certainly tell him in reply that he can grow much better fruit with it; indeed, it may well be doubted whether much, if any good fruit is grown without its aid. We think a proposition of that kind susceptible of easy demonstration. Many soils contain some of it, but comparatively few, except at the West, have enough. It may be added to most soils with decided benefit, whether the object be to grow fruit or the ordinary field crops. We were led to attach so much value to carbonaceous matter as



the result of many years of observation directed specially to this object. It must be understood, however, that a soil may sometimes contain too much of this matter, and the trees be over-stimulated in growth; the wood, in consequence, may ripen imperfectly, and be winter killed. This is often seen in the rich carbonaceous soils of the West, as we have remarked on former occasions. It is better, however, to have too much than too little of it, because the evil of a superabundance is more easily remedied than that of a deficiency. Let each one, therefore, supply himself abundantly with carbonaceous matter, in the form of muck, charcoal dust, rotten leaves, or any similar matter within his reach.

The reader will probably be a little curious to know some of the results that may be expected to flow from the use of muck. Briefly, it will be found to conduce to the general health of the tree; to contribute to its

fruit-producing qualities; to add to the warmth of the soil, and promote the formation of secondary or fibrous roots; to add size, beauty, and excellence to the fruit. We think this muck concerned in adding to the quality of all kinds of fruit. These are some of the results obtained from its use. The particular *modus operandi* will be explained hereafter. It must not be supposed, however, that muck is a panacea, or performs other than a perfectly natural office, any more than barn-yard manure does. This would be to attribute to it virtues which it does not possess. It is, however, an important element of fertility widely distributed by a bountiful Nature, but too much neglected by man. If wisely used, it would add many millions of dollars to the productive wealth of the country. With the inexhaustible supplies of it scattered all over the country, there is no reason why a single acre of land should ever become barren. And with this remark we close for the present.

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## RESIDENCE OF LINDLEY M. FERRIS, ESQ., NEAR POUGHKEEPSIE, N. Y.

BY GEO. E. WOODWARD,

Architect, No. 37 Park Row, New York.

THE residence of Mr. Ferris, of which a view is given in our *frontispiece*, is located south of the city of Poughkeepsie, and almost or quite within its suburbs. The surrounding estate, of 150 acres of handsomely rolling land, possesses all the attractions of beauty and fertility so generally awarded to the finer portions of Dutchess county. In the immediate vicinity are some of the highly finished and well-kept country seats which adorn this portion of the Hudson, and make up the attractions which taste and refinement always add to country life.

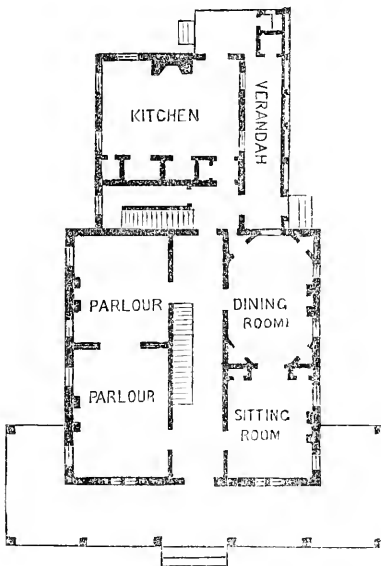
The object aimed at in the design of this house, was that of a substantial and commodious mansion, suited to the requirements of a large family, and that should express its purpose in the simplest manner at a moderate expense. It was therefore desirable to avoid all costly irregularity of form, and all the fanciful varieties of gimmeracks.

The style selected as best illustrating this purpose is the Chateau roof, Louis XV. style; the main building being 43 feet square, with a rear addition 25 by 29 feet; the plan illustrating the arrangement of rooms, verandah, etc. The first floor gives double parlors, (one of which may be used as a bedroom or library,) a sitting-room or reception-room, dining-room, and a large kitchen, with necessary closets, an inclosed verandah, water closets, etc. The second floor, main building, gives four large bed rooms and two smaller rooms for other purposes, and in the rear are four servants' rooms and a bath-room. The attic story, main building, has now five rooms, finished with closets, and two rooms more can be added by putting up two partitions. These upper rooms, in a roof of this character, are cool, well ventilated, well lighted, and agreeable in warm weather, there being roomy air chambers between the attic ceiling and the

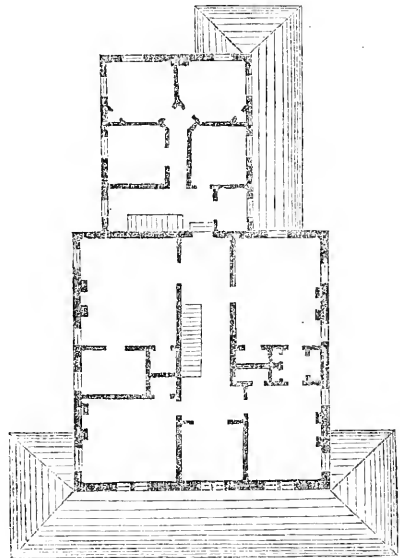
upper roof, and also between the walls of the rooms and the outer wall of the house. There is but little difference in the value of these rooms and those on the floor below, except convenience of access.

The house is built of brick, in a first class manner, the lower roof slate, the upper one being tin; is thoroughly finished throughout, and is in all respects a convenient, durable, and commanding structure, giving the largest amount of room in a desirable and attractive form, with the most economy of means. It is situated on a knoll overlooking

two of the principal drives southward from Poughkeepsie, which, when completed, will add a new attraction to the beautiful suburbs of this city. The views from the grounds, more particularly from the top of the house, are varied and extensive. The mountain panorama, which sweeps three-fourths of the horizon, beginning with the Fishkill mountains, and ending with the Catskills, is exceedingly fine. The eastern view embraces the Vassar Female College, the noble gift of Matthew Vassar, Esq., to the cause of female education. In the foreground and middle dis-



FIRST FLOOR.



SECOND FLOOR.

all the surrounding grounds, which include a number of other fine sites, one or two of which, we think, even more desirable than the one selected. It is not, however, an easy matter to choose one from a dozen sites, each almost equally good.

A new road is now being laid through these and the adjoining premises, to connect

tance are the rich rolling landscapes of Dutchess and the fertile hillsides of Ulster counties, the glittering spires of Poughkeepsie, the lordly Hudson, and southerly are seen the famous Beacons and the Highland Pass,

“Where Hudson’s wave o’er silvery sands  
Winds through the hills afar.”

# INTERIOR VIEW OF THE "BRIGHT" NUT.

BY FOX MEADOW.

HISTORY furnishes the fact, that all subjects brought before the public mind, when of a character varying from the commonly accepted opinion of the day, no matter how clearly a truth may be represented and demonstrated, meet with little favor, and up jumps instantly a whole host of opposition, and it fights to the "last ditch," not in vindication of a truth, but for an antagonistic prejudice—a support of some *theory*, because it is such as they have advocated, or it is that in general acceptance; and hence, many great and glorious truths are buried in the cold earth with the minds that gave them birth, simply because of man's common practice of fighting against every thing he has not been taught either at his mother's knee, or by his school-teacher.

No greater proof of this species of blind prejudice can be afforded than in the "Nut" sent us to "crack" from Philadelphia by one whom the reading public are led to *suppose* is Mr. Bright. This gentleman seems to be quite full of something; and this something, Mr. Editor, has nearly blinded him. We are confident he must be nearly blind, and so pity his condition. He seems to be fond, though, of our "Interior Views," for he has invited us to take another, to which we kindly consent for his benefit, and hope also for the benefit of our readers.

Before this gentleman reads any more of our "Interior Views," we beg to offer him a little advice: to put on a pair of spectacles of good magnifying power, which will, perchance, enable him to read *correctly*! What troubles this gentleman so much is our compost; and there is one of the ingredients he thinks a "defect in his composition, which renders his method of making borders open to *serious* objection." This gentleman, whom we take to be short-sighted, tells your readers, Mr. Editor, that Fox Meadow makes his vine borders of loam, sand, and *leaf-mould*; and it seems that it is chiefly "to the large quantity of *leaf-mould* that objec-

tion is taken." Now the whole of this wonderful "nut" can be cracked in a very few words. We never stated that we used "leaf-mould" in *our* compost. We never stated that we used "leaf-mould" in *our* borders. Neither is "leaf-mould" given as a *component* of the compost we have recommended. "Substitutes," however, are intended, the nearest being most desired; and as conditions control results, men generally use the best under the circumstances in which they are placed.

Fox Meadow don't make his vine borders of loam, sand, and *leaf-mould*; but Fox Meadow does use as a compost, and does recommend, SAND, SANDY LOAM, AND MUCK. Now we do hope, Mr. Editor, that you will have the last sentence printed in good large capital letters, because you must be aware of the great assistance large type is to persons very near-sighted. Your correspondent has shown much ability in his "nut" article, but it lies in his power to grossly pervert the *sense* and *wording* of our statements. Where do we make "little account of bones, lime rubbish, charcoal, and manure, as highly esteemed by others?" Nowhere but when placed *in* the border. Where have we recommended the use of *large quantities of leaf-mould*? Nowhere can such inference be attached to the name of "leaf-mould," only by a blind perverter of truth and common sense! When "muck" can not be got we would use the best substitute, and the latter is charcoal or leaf-mould; and if either of these can not be got, use "sand and loam alone."

If we have labored to show any thing in our articles, it was the evil tendency of *decomposing* matter in vine borders. The next point was to show the necessity of the border being open and porous permanently, and at the same time to so change the formation of the vine's roots as to cause them to entirely fill the space of ground prepared for them. This was the gist of our whole

argument. The bulk of the material we use is *sand*, and a sufficiency of carbonaceous matter placed *in* it to retain in the sand such elements of food as may pass from the *top* of the border *downward*; therefore the writer has given himself a vast amount of useless trouble in quoting authors to prove the *possible* bad results of ingredients *we make no use of!* It is true that we have not advocated the use of bone, superphosphates, and "our special fertilizer" *in* the compost, because we think just as Mr. Bright does, when he says that "bone" only answers the purpose of so much sand; and as the latter is decidedly cheaper than "bone," we wish our readers to understand the "relative properties" of the materials, and so use the cheapest. Perhaps Mr. Bright considers *muck* and *leaf-mould* identical. We, however, do not; and if *he* does he certainly has tumbled into a gross mistake. Muck, as it is termed when lying in immense quantities in swamps, *is decomposed vegetable matter, with the partial exclusion of the air*, and, consequently, a large proportion of its "carbon" remains in the *exact* condition to serve and answer the purpose of charcoal. This specific fact, answered, perhaps, more scientifically, would be owing to the insufficiency of oxygen supplied to unite with all of the carbon. In this simple fact lies the difference between muck and humus, so commonly confounded.

"Humus" is the substance formed from solid animal or vegetable matter by decomposition immediately under the action of the air, which fact renders the chemical properties much different in the two cases of decomposition. We claim that muck, after being freed of its acid by the action of frost, is equal to charcoal, and we prefer it in vine borders to the latter, because its practical results or products are better. We find that, after being incorporated with sand and loam for *seven years*, it appears in as good a condition as it was the first day it was put in our borders.

Now we certainly do prize this muck very much, and to this extent: that if a

horse-load of rotten dung cost one dollar, we would freely pay fifty cents for the same quantity of muck.

The quotations from Dr. Lindley, Thomson, etc., are "bits" picked out to answer the purpose of Mr. Bright, and so "fiddle out" any tune he thinks proper. The original articles quoted have reference to the absurdity of digging deep holes for vine borders, and then filling them up with a lot of humus on wet, cold bottoms; also to the injurious effect of using half-rotten wood and leaves, if collected and used in such a condition. In fact, these references, when read with their connecting sentences, mean and say just what we have already said in our articles, and just what any practical gardener would say if he had lived in the world long enough to know what he was talking about. In England, as here, the practice has been, *and now is*, to push almost any thing that can be got into vine borders, either in a state of decomposition, or to be there decomposed.

As to those beautiful lands of the West, rich with organic matter, causing "disease and death" to plants, we know but one thing of them, and that is, of the almost incredible quantity they annually produce! Certainly the carbonaceous matter plays a very important part for the benefit, not only of those in this country, but also for millions of mouths in different parts of Europe!

We wonder what Dr. Lindley and some other "Drs." would say, Mr. Editor, if they saw our garden of muck! These gentlemen, who carry theories in their pockets, would be utterly astounded to see all the things we grow on a bed of muck. Norway Spruce, three feet high, planted three years last spring, stand now from twelve to sixteen feet high, and eight and nine feet through them; Pears on Quince, in three years, (two years old when planted,) measure, some of them, ten feet high and eight in diameter. These not only grow, but they fruit equally well. The poor old Vicar of Winkfield fills out his sides with this rich carbon (so destructive to plants) to such

an extent that we never saw a "Vicar" look so jolly before. Small fruits yield in abundance. The strawberry remains ever-green during the winter, and the Brincklé Orange Raspberry gives us such canes and fruit that we never before saw their equal; and the flavor—well, Mr. Editor, you ought to come up in the season and *taste*, for people say you are an excellent judge of fruit (!) We grow grapes (hardy) on this muck also, and what is very strange, they grow and fruit most beautifully! It is really a wonder they don't die on this bed of humus! We think if that gentleman in Philadelphia who said so much about "out-door grapes"—we mean the gentleman who never could nor ever did succeed in "making it pay"—had got about one thousand loads of our rich carbonaceous muck plowed into one acre of his miserably poor, starved grape-vines, the fruit of the grapes would not have been quite so sour as they were; for we think this muck must surely contain a goodly proportion of the celebrated "tartaric acid," because all the vines, when they once touch it, *are sure to fruit*. We need scarcely add that all the different varieties of vegetables grow on this muck soil equally well.

But we are forgetting the grape question; and as one grain of practical evidence is worth a ton of theory concerning muck or any thing else, we will now give a few facts as the results from the exotic grape grown in SAND, SANDY LOAM, AND MUCK. In the first place, the graperies of these gardens, which comprise some 1,200 lineal feet of glass, never knew what it was to have a natural season of growth; that is, the vines have always been early forced into growth, and during the severe winter months of the year. The vines have been forced now for seven years, and our fruit is generally ripe in April. We have cut in March. We never sacrificed the principal crop of a vine for the purpose of getting an extra sized individual bunch; yet, under these circumstances, we have cut bunches, and exhibited, weighing, (can produce proper vouchers,) Hamburgs, 5 pounds; Chasselas de Fon-

tainebleau, 3½ pounds; White Frontignan, 3½ pounds; Barbarossa, 6 pounds; Muscats, 5 pounds. Early last April we sold at Taylor's Saloon, on Broadway, many bunches of Cannon Hall Muscat weighing from 3 to 4 pounds. The other day we left at the office of this Journal some wood from the "leaders" of these vines—Hamburgs and Chasselas—for the editor to look at, as *evidence of the effect of "muck" after seven years of hard forcing!*

We offer this not as an evidence of any peculiar skill; not that we can command or do more than others can do; not for any vain, silly boasting; but as evidence to substantiate what we are talking about, and of the good results derived from a rich carbonaceous muck properly prepared, and properly proportioned with SAND and SANDY LOAM. Let us see now how stands our "Nut" question: Muck with *facts*, and muck with *theory*.

Now suppose we just see what "Inside, detached, divided borders" have produced: First, an immense deal of "blowing," to clear the way, we suppose, for the wonderful products that were to follow. In 1860 Mr. Bright's first edition of his book appeared. On page 10 we read: "This work was originally intended to be simply a handbook of instruction in the management of grape vines in pots, and the system we advocate has chiefly grown out of our experience in that kind of culture." Now the system that a man advocates and wishes others to adopt, reason tells us ought to be a good one; and as good results from grape vines will chiefly depend on the soils in which they grow, let us just see what Mr. Bright's compost is. On page 19, we read: "The leading requirements of the vine for the formation of roots and wood, are carbonaceous loam, alkaline phosphates, silicate of potash, carbonate of soda and lime, and a good proportion of *nitrogenous* manure. Our method of making compost for vine borders, so as to combine the requisite ingredients in the proper proportion, will be given in another part of this work." On page 65 we are given the compost for

borders, and from which we are told, "*The highest success will be attained*;" and this compost is, "Good loam from the surface of a well-cultivated field. Let this loam be mixed with one-third its bulk of sod from an old headland or pasture. Add to about 21 horse-loads of this mixture, about four bushels of good water-slacked lime, four bushels of unleached or ten bushels of leached wood-ashes. Now add to this compost of about twenty horse-loads, say five one-horse loads of well-rotten stable manure, horse and cow dung, and ten horse-loads of rotten rock and sandy road-scrappings from a turnpike. If you choose to add ten to twenty bushels of finely crushed bones, or one or two barrels of good super-phosphate of lime, or *our special fertilizer*, it will be useful, although the *bones will serve little other use than a substitute for sand*; and the super-phosphate of lime or fertilizer may be better applied upon the surface of the border when needed. Let your vines at first rest in good natural soil, *well manured*, and they will form plenty of vigorous wood; afterwards apply 'special fertilizers,' as needed, to produce and perfect the fruit, and *the highest success will be attained*." "Put no carcasses of animals, offal of slaughter-house, night soil, *guano*, or any rich animal matter, or other stimulating manure, into or under the border, beyond what we have advised; although, if the stable manure be poor, it may be made a little richer by the addition of a *bag of guano, (!) without injury*." The whole of this is to be turned and mixed, put into the border, and mulched. Mulched with what? "*Two or three inches of HALF ROTTEN LEAVES!*" Now it must be remembered that, to *begin with*, Mr. Bright has said that the vines are to rest on "A good natural soil *well manured*," (page 66,) and the compost to go on this is:

To 20 loads of loam and sods,  
 5 loads of rotten dung,  
 10 " " " rock or road-scrappings,  
 20 bushels of bones, or "special fertilizer," or super-phosphate,  
 10 bushels of leached ashes,

4 bushels of lime,  
 1 bag of guano.

It will be seen, from the articles named, that one-fourth is *rotten dung*, and to which 40 bushels of "tid-bits" are to be added.

In the case of the guano, Mr. Bright strictly cautions his readers to use *no guano*, and then almost in the same breath tells his readers they may use it "without injury." In reference to the "bone," it is only just to say, that Mr. Bright leaves it optional with his readers which they use, "twenty bushels of finely crushed bones, *or* one or two barrels of good super-phosphate of lime, *or* our special fertilizer." Now, according to the inference of Mr. Bright, the one is equally as good as the other; and as he has just now stated, that "bones" in the border "will serve little other use than as a substitute for SAND," he unwittingly admits that *his* "special fertilizer" will answer a no better purpose. So that this great fertilizer, which the horticultural world were led to suppose contained such elements for *fruiting* the vine as were never before known, and including the celebrated "tartaric acid," is, after all, of no better use in the vine border than a bag of SAND. Now, after the vines are planted in this compost of Mr. Bright's, he directs that the border shall be topped off (mulched) with "two or three inches of HALF ROTTEN LEAVES."

Don't this writer know, that "the enrichment of the soil in organic matter appears to be the cause of *disease* and *death* to many plants!" (Klippart on the Wheat Plant, p. 355.) Don't Mr. Bright know what William Thomson, gardener to the Duke of Buccleuch, Dalkeith Park, Scotland, says about leaf-mould and wood earth? "In every morsel of decaying wood there are *spores of fungi* that are certain one day to destroy the vigor of the vines, and in many cases to kill them altogether!" Again this William Thomson adds, "Leaf-mould, when reduced to black earth, may with advantage be added to any compost for vines, but NEVER in a HALF DECAYED STATE." O Bright! what a pity it is you advise *half rotten leaves* to contaminate *your* border even by their touch!

But, perhaps, Mr. Bright don't mean *half rotten leaves*, although it is so printed in his book. Perhaps he means "leaf-mould" *thoroughly decomposed* (?) But, can Mr. Bright tell "how long a period of time it would require to decompose it, so that the microscope would fail to reveal the *seeds* (?) of fungous growth?" "What process of decomposition should we adopt, and when would it be complete?" O Bright! have you never seen what Dr. Lindley says about leaf-mould? "Even when well decomposed, and converted into humus, it will cause the destruction of delicate fibrous roots." Why do you use them *HALF ROTTEN*? "It looks as if the case must be decided against you." But then, friend Bright, if you should "own up that there is danger in *HALF ROTTEN LEAF-MOULD* when placed in grape borders, it will not be the first time an eminent grape grower has fallen into an error in border making."

In order to do Mr. Bright full justice in this matter, it becomes our duty to refresh our readers' minds with the fact that Mr. Bright has issued *two books* on grape growing; one in the year 1860, from which we have taken our quotations, and another in the year 1861. In 1860 we are told the best compost for vine borders is, loam and sods, rotten dung, bone *or* "our fertilizer," lime, wood-ashes, rotten rock, guano, to be placed on a good soil well manured, and to be finished off with *half rotten leaves*. In 1861 comes the *second* book, and with another year of practical (!) experience which reveals to the world an astounding and important fact; that he ignores and throws overboard the system of border making he so strenuously advocated a little more than a year previous; and it is to this recantation of faith that Mr. Bright calls our attention in his book on composts. He says: "In the second edition of my work on Grape Culture, p. 89, will be found the following passage: For nearly two years past we have formed all our large grape borders, especially those partially outside the house, of half good loam from an old pasture, and nearly half road sand or fine soft rotten rock, with the addition of a little pulverized lime rubbish from old walls

and ceilings, and a little fine bone dust." Here our friend Bright has very craftily omitted the connecting sentence in this paragraph quoted; but we, however, will add it: "In small inside borders, when the moisture is under perfect control, we might use a little *well-rotted dung* and good *LEAF-MOULD*!"

To be serious, Mr. Editor, is it possible that any man in his normal condition ever wrote such a conglomerating host of absurdities and self-contradictions as are penned in this book just quoted? Is it possible that a man endowed with common sense could have read in our articles *leaf-mould* for *muck*, and then, while laboring under this evident delusion, go and hunt up all the authorities he could get hold of to prove the destructive tendency of an ingredient *he uses himself, as well as recommends others to use*! For nearly two years past, (second edition, p. 89,) says Mr. Bright, he has formed his borders of half loam, and nearly half road sand, with pulverized lime. Now, there were no *two years* elapsed between the issuing of the first and second editions; not a great deal over one year; consequently, when Mr. Bright states in his first edition his *certainly* in the good results of rotten sods, fine bone dust, "our special fertilizer," well-decomposed stable manure, lime, guano, and climaxed with *HALF ROTTEN LEAVES*, he must, according to his own logic, have given his readers a false statement, or the statement on page 89 must be wrong. We visited Mr. Bright's nursery the latter part of April, 1860, purposely to *see* some of the wonders which his book speaks of; but, lo! there was not a single vine planted out on his place, neither in detached borders nor any other sort of borders under glass; yet the book was out promulgating—what? a mere *theory*!

When a man talks at random in this way, who can place any confidence in what he says? When a man is confident one day that his compost is all that is needed, and then contradicts it in about 12 months, it is quite sufficient to convince any rational mind that there is *no experience* in the matter, but a lot of jumbled up theories; a fit effusion for some empiric of medicine, who has a smatter-

ing of horticulture; who, through quackering with the two, has produced a jumble of the brain. No practical gardener would ever have written such a book of discrepancies. No practical gardener would ever have invited us to CRACK SUCH A NUT.

"Policy" admonishes friend Bright to hold his peace until he brings his bunches of grapes as the *weighty evidence* of his theory. Is there no evidence, ask our readers, in favor of "detached, divided borders?" Has "Fox Meadow" any experience with them? Has "Philadelphia" any *experience* on this subject? Are they being pulled down there as failures?

(To be Continued.)

[We supposed that Fox Meadow would

have taken this "Nut," and turned it around delicately, to find a weak place where it would open easily; but, so far from that, he has used a sledge hammer to crack it at a single blow. We wait now to see how Mr. Bright will gather up the fragments. In our opinion, there is a good deal in this muck question, if only properly brought out. In cracking nuts, we hope neither party will crack too hard jokes. In regard to the wood left by Fox Meadow, we must say that we never saw any better, and seldom any as good. It is about an inch in diameter, very close jointed, of a bright color, fine grained, thoroughly ripened, and with large, round, well-developed buds. We purpose converting one of these canes into a walking stick.—ED.]

## THE DAHLIA.

BY A SUBSCRIBER, BALTIMORE.

MR. EDITOR,—Your correspondent in the December number of the HORTICULTURIST gives us a very able article on the Dahlia, and his requirements for the points of perfection are very correctly and lucidly stated. But I much doubt whether one in twenty of the prize flowers come up, in all points, to the standard laid down for a perfect flower. Therefore we must be contented with those approaching *nearest* in feature to the desired model.

Some years since the following rule was laid down for the action of the judges of some of the English shows:

That *form* must have *præminence*; then *color*; and, lastly, *size*. The relative proportions of these criteria are as follows:

Form, 3.

Color, 2.

Size, 1.

Thus a flower having form and color would be judged superior to one having color and size, the relative proportion being as five to three. The perfection of form is the nearest approach to a hemisphere, and the outer edges forming a true circle. Occasionally, however, you will find a flower going beyond

the first requirement of this form; as, for instance, that fine old variety, "Lollipop;" it forms two-thirds of a ball, with a good height in the center, and a fine rounded shoulder.

It is evident that the large number of prize flowers exhibited in the winning stands every season in England for the last twenty years, can not all come up to the high standard of excellence as laid down; so the judges must give the awards to those flowers containing the largest number of the points constituting perfection.

As you request additions to the excellent, but limited list published at page 563, I give the following as best the past season in a collection of 150 varieties:

Beauty of Hilperton, (Turner, 1861.)

Madge Wildfire, " "

Marquis of Bowmont, (Dodds, 1860.)

Carrie Emmons.

Marie Rougier, pure white, superior to Vesta.

Mrs. Dodds, (Dodds.)

Umpire, (Turner, 1861.)

Andrew Dodds, (Keynes.)

Mrs. Boshell, (Rawlings.)



Princess of Prussia, (Pullen.)  
Neville Keynes, (Keynes, 1860.)

*Fancy Varieties.*

Norah Creina, (Green, 1861.)  
Starlight, (Keynes, 1861.)  
Leopard, " 1860.

Summertide, (Turner, 1861.)

Talisman, (Cailloux.)

Dandy, (Keynes, 1860.)

Of the older varieties, the following were  
the finest:

Chairman,	Baron Alderson,
Vesta,	Charles Perry,
Loveliness,	Grand Duke,
Lollipop,	Præminent,
Magnificent,	Lady Popham,
Dr. Bois Duval,	Gloire de Kain,
Triomphe de Roubaix,	Mad. Zahler, (1847,) Pouliditto.

As I have seen nothing in the HORTICULTURIST relative to the past season's exhibitions in England, perhaps a hasty resumé of two of these annual shows, the Metropolitan and the Royal Society, held in September, will not be uninteresting. It is copied from the *London Florist and Pomologist*, for October.

At the Metropolitan (Crystal Palace) exhibition there were offered six prizes for from twelve to forty-eight blooms. For these premiums there were twenty competitors. The names of 180 varieties were published, some sorts being in the winning stands three or four times.

At the Royal Society's show, five prizes were offered. There were seven competitors, and the names of 126 flowers published.

To bring the list of the flowers within bounds, none are given in the following list except those named three times:

Lord Palmerston,	8 Lady Elcho,	4
Lord Derby,	8 Sidney Herbert,	4
Chairman,	8 Model,	4
Beauty of Hilperton,	6 Madge Wildfire,	3
Earl of Shaftsbury,	6 Sir Geo. Douglass,	3
Lady Popham,	6 Hon. Mrs. Trotter,	3
Golden Drop,	6 George Brown,	3
Jenny Austin,	6 Admiral Dundas,	3
Umpire,	5 Goldfinder,	3
Cherub,	5 Mrs. Boshell,	3

Norfolk Hero,	5 Marquis of Bowmont,	3
Juno,	5 Lilac Queen,	3
Pioneer,	4 Pandora,	3
John Keynes,	4 King of Sweden,	3
Criterion,	4 Mrs. C. Waters,	3

*Fancy Varieties.*

Lady Paxton,	6 William Corp,	3
Harlequin,	5 Mrs. Crisp,	3
Queen Mab,	5 Garibaldi,	3
Pauline,	4 Elegans,	3
Mary Lauder,	3 Norah Creina,	3

These two lists of the most popular flowers in England will aid those adding to their collections the coming season.

Of Mr. Richardson's seedlings, only a portion of them bloomed with me this season. Carrie Emmons was considered an improvement upon Lollipop; Emma Cheney was also fine, with a fair footstalk; and Debbie de Gray exhibited extra fine, clear colors.

If a few more of your correspondents will send in their lists, and you, Mr. Editor, would add your roll of favorites, the Dahlia fanciers will be better posted for the next season.

[We are much indebted to "Subscriber" for his very interesting article on the Dahlia. Mr. Veitch's Dahlia points were well and clearly given, and none too high, though, as we have before remarked, comparatively few can be expected to come fully up to them. We would not lower these points in the least, for it is only by aiming high that we can hope to attain to the full standard of beauty. The points you mention, and their order, are precisely those we prescribed a good many years ago for the judges of the American Institute, as may be seen in its Transactions. The occasion which gave rise to these rules will illustrate the necessity and importance of something of the kind wherever rules can be applied. Justice to the exhibiter, however, requires that they should always be published. On the occasion alluded to, the judges, three noted Dahlia growers, reported that they could not decide which was the best of two stands of Dahlias, they were so much alike.

We told them we could not accept such a report, and requested them to make a further examination. This they did, and at the end of half an hour returned, still undecided, and requested us to decide for them, which we declined. We went to the stands, however, and, after a careful examination, saw that we, at least, could decide between the two stands. We then gave the judges the rules alluded to, explained their application, and in ten minutes' time the matter was settled. There may very naturally be a difference of opinion as to what should constitute the rules by which judges should be governed; but, when once clearly settled and defined, there ought to be no difficulty in their intelligent application. We are in hopes that Mr. Veitch's excellent article, and that of "A Subscriber," will lead to so much discussion as to settle the leading points of a good Dahlia, as well as of other flowers. Our own opinion is pretty well made up, and we should have no hesitation in prescribing a set of rules; still, we should like to have the subject fully discussed. As the

result of a pretty extended experience in public exhibitions, we are led to conclude that justice, according to merit, is very imperfectly meted out. This is quite as often owing to imperfection on the part of the Society as of the judges. By all means let us have well-digested rules, and let them be rigidly applied by impartial and competent men. We are much pleased with your list of Dahlias, and are glad to see in it the venerable Madame Zahler, an old favorite of ours, which we should even now hesitate to omit in a list of a dozen, so many substantial points does it possess. You shall have our list before the spring opens; but we do not wish to anticipate others. We agree with you that Carrie Emmons is an improvement upon Lollipop, and that is great praise. We shall expect, in the course of another season, to hear Mr. Veitch admit, with his characteristic candor, that Emma Cheney has a very fair footstalk. You will also find Debbie de Gray very fine in both color and form. We shall be very glad to hear from you often.—*Ed.*]

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## REPORT ON GRAPES.

BY F. C. BREHM, WATERLOO, N. Y.

SEEING that model reports are in fashion, I herewith send you mine.

1. Delaware. Leaf, May 14th. Flower, June 28th. Color, Aug. 24th. Ripe, Sept. 13th. Sold for 30 cts. per pound.

2. Diana. Leaf, May 10th. Flower, June 23. Color, Aug. 22. Ripe, Sept. 20th. Quality, next to Delaware.

3. Hartford Prolific. Leaf, May 14th. Flower, June 27th. Color, Aug. 30th. Ripe, Sept. 13th. Quality, ordinary.

4. Concord. Leaf, May 15th. Flower, June 26th. Color, Sept. 1st. Ripe, Sept. 25th. A showy grape. Quality poor; foxy.

5. Isabella. Leaf, May 10th. Flower, June 13th. Color, Aug. 14th. Ripe, Sept. 25th. Quality, good. One cane of Isabella grown last year, and fruited this year, seven

feet two inches long, had fifty-two clusters, the whole weighing, after taking from the cane, thirty-one pounds. Was exhibited at the Seneca County Fair, and took the first premium and diploma. Sold on the spot for \$4 00. Some of the clusters weighed fourteen ounces, and some of the berries measured 15-16 inches in diameter, looking more like Black Hamburgs than Isabella grapes.

6. Union Village. Leaf, May 12. Flower, June 26th. Color, Aug. 12th. Ripe, Sept. 14th. Quality, good.

7. Clinton. Leaf, May 12th. Flower, June 13th. Color, Aug. 15th. Ripe, Sept. 16th. Quality, good for wine.

8. Rebecca. Leaf, May 16th. Flower, June 27th. Color, Aug. 14th. Ripe, Oct. 1st. Quality, best. Rather poor bearer.

9. To-Kalon. Leaf, May 13th. Flower, June 26th. Color, Sept. 1st. Ripe, Oct. 4th. Quality, good. Liable to rot. Good bearer.

10. Anna. Leaf, May 15th. Flower, June 27th. Color, Sept. 26th. Did not get perfectly ripe by Oct. 16th. Quality, said to be good. It is too late a variety for this latitude, unless it ripens earlier when older.

11. York Madeira. Leaf, May 14th. Flower, June 27th. Color, Sept. 1st. Ripe, Oct. 1st. Quality, said to be good for wine; not a good table grape, unless it improves.

12. Catawba. Leaf, May 15th. Flower, June 26th. Color, Sept. 6th. Ripe, Oct. 4th. Quality, good. Rather too late a variety for this climate.

The following varieties were more or less touched with mildew. Applied sulphur, dusted on, which effected a cure. Isabella, July 31st, showed signs of mildew. Sept. 6th, To-Kalon, Rebecca, Delaware, and

Concord mildewed lightly, caused, I think, by the large amount of rain which fell in July and August.

[Mr. Brehm, we think, sent us the first of the model reports, the second being that of Mr. T., of Harlem, N. Y.; since which they have multiplied, but none too much either for us or our readers. We should be glad to have them extended to other things besides grapes. The cane of Isabellas must have been a beautiful sight. We observe in the *Seneca Observer* that you not only took the first prize for grapes, but also for the best garden; and you must allow us to add, that we are always pleased when any of our subscribers succeed in winning public praise. If you have the true York Madeira, you will find it quite as good as the Isabella; a little earlier, but smaller in bunch and berry, and not very productive. We should be pleased to have the plan alluded to.—Ed.]

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## ILLINOIS STATE HORTICULTURAL SOCIETY.

BY W. C. F.

THE seventh winter meeting of this flourishing society commenced at Bloomington, on Tuesday, December 2d, and continued for four days. The attendance was larger, I think, than at any previous meeting, and perhaps of more than average ability. Besides our own well-known horticulturists, such as Overman, Phoenix, Bryant, Shaw, Shepherd, Whitney, and others, we had Dr. Warder, of Cincinnati, Professor Worthen, our State geologist, J. P. Reynolds, Secretary of the State Agricultural Society, besides an able representation of the agricultural press in Emery of the *Prairie Farmer*, Dunlap of the *Illinois Farmer*, Colman of the *Valley Farmer*, Bragdon of the *Rural New Yorker*, and Meeker of the *New York Tribune*.

An attempt was made this year, and partially carried out, to furnish an essay (or rather three essays—one for each of the three parts of the state) on each topic, to be

followed by a discussion, both of the essay and of points which it did not touch; and although many essayists failed to be present, a good many brought or sent some very practical and valuable papers. There is no doubt, I think, that a continuation of this practice, which succeeded so well in the Yale Agricultural lectures, will prove of great utility in giving a more thorough and comprehensive character to our discussions.

*The White Willow* (*Salix alba*) was, although not on the bills, made a principal topic of discussion. The importance of rapid growing timber trees to the denizens of the great prairies of Northern and Central Illinois, has kept our more intelligent farmers continually on the watch for varieties which promised success. The Locust has been tried, but it sprouted badly in cultivated fields, and, worse still, was ruined by the borer. The Silver Maple, though a rapid grower, has

not proved entirely satisfactory. But in the White Willow, it is thought, has been found a tree which will grow with great rapidity from cuttings in dry or wet land, and even make a solid timber fence, sufficient to exclude cattle and horses, if not hogs and sheep. Mr. Huggins, of Macoupin county, exhibited two years' growth from a cutting, which was now 18 feet high and 13 inches in circumference at the base. Gentlemen present, who had visited fences in Ogle county, made by sticking down cuttings about 12 inches apart, reported that they had grown up into an almost solid wall of wood, surmounted by a wide spreading and lofty mass of wood and foliage of great beauty, and useful for fire wood, rails, and even posts and lumber for inside work. Englishmen and Germans present affirmed its various utility in the old world, especially in the English fens. Gentlemen from Delaware bore witness to its excellence in manufacturing charcoal for Dupont's powder, and in the enthusiasm of the moment, shingles and hoop poles were suggested. One wag even went so far as to inquire, in a private way, the capacities of this remarkable tree for sugar making!

*Grapes* were discussed. A good deal of difference of opinion was elicited in regard to the Delaware and Catawba in different localities, but both were retained on the lists, which I subjoin:

*Table Grapes*.—Hartford Prolific, Concord, Herbemont, Isabella, Catawba, Delaware.

*Wine Grapes*.—Catawba, Delaware, Herbemont, Norton's Virginia, Clinton, Concord, Rulander.

*Other Fruit Lists*.—Our state, owing to its great length north and south, embraces too great a variety to be included in one fruit list, and is accordingly divided into Northern, Central, and Southern Illinois, (better known as Egypt.) Two years ago seven districts were constituted for the purposes of more minute information, and full lists requested from these. One only was reported at this meeting, viz.:

*Alton District Fruit and Tree List*.

APPLES, *Summer*.—Early Harvest, Keswick Codlin, Red Astrachan, Carolina Red

June, Sops of Wine, Benoni, American Summer Pearmain.

*Autumn*.—Rambo, Wine, (Hay's Winter, Pennsylvania Red Streak,) Hubbardston's Nonsuch, Fameuse, Fall Pippin.

*Winter*.—Raule's Jannet, Winesap, Domine, Fulton, Jonathan, Gilpin, Willow Twig, Smith's Cider, White Winter Pearmain, Pryor's Red.

PEARS.—Bartlett, Belle Lucrative, White Doyenné, Seckel, Louise Bonne de Jersey, Duchesse d'Angoulême.

PEACHES.—Large Early York, Cole's Early, Troth's Early, Early Tillotson, Crawford's Early, Crawford's Late, Stump the World, Oldmixon Free, Morris White, White Heath, Bergen's Yellow.

CHERRIES.—Early Richmond, May Duke, Belle de Choisy, Late Duke.

GRAPES.—Concord, Hartford Prolific, Catawba.

EVERGREENS.—Norway Spruce, White Pine, Austrian Pine, American and Siberian Arbor Vitæ, Red Cedar.

DECIDUOUS, *Ornamental*.—Silver Maple, Sugar Maple, White Elm, Catalpa, European Mountain Ash.

DECIDUOUS, *Ornamental and Timber*.—White Willow, Silver Maple, Black and White Walnut.

The Apple Lists for Northern, Central, and Southern Illinois were hardly changed. I subjoin the lists for "General Cultivation:"

*Northern*.—Early Harvest, Carolina Red June, Red Astrachan, Hightop Sweet, Keswick Codlin, Early Pennock, Duchess of Oldenburg.

Maiden's Blush, Lowell, Snow, Bailey's Sweet, Fall Swaar.

Winesap, Raule's Jannet, White Winter Pearmain, Domine, Jonathan, Willow Twig, Fulton, White Pippin, Roman Stein, Gilpin, Yellow Belleflower, Northern Spy, Tolman's Sweeting, Wrinkler.

*Central*.—Early Harvest, Carolina Red June, Red Astrachan, Hightop Sweet, Keswick Codlin, Hocking, Benoni, American Summer Pearmain.

Maiden's Blush, Rambo, Snow, Bailey's Sweet, Fall Swaar.

Winesap, Raule's Jannet, White Winter Pearmain, Domine, Jonathan, Willow Twig, Fulton, White Pippin, Roman Stem, Gilpin, Milam, English Golden Russett, Smith's Cider.

*Southern*.—Early Harvest, Carolina Red June, Red Astrachan.

Maiden's Blush, Rambo, Buckingham.

Winesap, Raule's Jannet, White Winter Pearmain, Limber Twig, New York Pippin, Yellow Belleflower.

*Pear List*.—"There are no snakes in Ireland"—no pear list for Illinois. The same is true of peaches and cherries.

PLUMS for general cultivation, Lombard.

For trial, Sloe or Red Chickasaw, Mirabelle, Huling's Superb, Coe's Golden Drop.

Of the smaller fruits I have not the data for a perfect list.

*The Next Fair*—Will be held at Rockford, Winnebago county, a region noted for its intelligent horticultural zeal, and will come off, probably, in the month of September. Last year the Society held its first fair at Chicago, which was, perhaps, the finest exhibition of the kind ever held in the West. These fairs are in addition to the Winter meetings for discussion, and, with them, are greatly promoting the horticulture of the Prairie State.

#### OFFICERS FOR 1863.

*President*, G. W. Minier, Mackinaw, Tazewell co. *Cor. Sec'y*, W. C. Flagg, Moro, Madison co. *Rec. Sec'y*, W. G. Ferguson, Rockford, Winnebago co. *Assist. Sec'y*, R. H. Fell, Bloomington, McLean co. *Treasurer*, Samuel Edwards, Lamville, Bureau co.

*Vice-Presidents*.—At large, O. B. Galusha,

Lisbon, Kendall co.; 1st dist. Jonathan Periam, Hope, Cork co.; 2d dist. C. N. Andrews, Rockford, Winnebago co.; 3d dist. A. R. Whitney, Franklin Grove, Lee co.; 4th dist. J. H. Stewart, Quincy, Adams co.; 5th dist. W. A. Pennell, Granville, Putnam co.; 6th dist. J. O. Dent, Wenona, La Salle co.; 7th dist. M. L. Dunlap, Champaign, Champaign co.; 8th dist. O. M. Colman, Bloomington, McLean, co.; 9th dist. C. C. Sturtevant, Beardstown, Cass co.; 10th dist. J. Huggins, Woodburn, Macoupin co.; 11th dist. C. A. Montross, Centralia, Marion co.; 12th dist. Geo. Barry, Alton, Madison co.; 13th dist. T. J. Evans, South Pass, Union co.

*Executive Committee*, G. W. Minier, C. N. Andrews, and O. B. Galusha.

*Transactions*.—Arrangements were made for publishing the Transactions of 1861 and 1862, both in separate pamphlet form and in the forthcoming volume of the Transactions of the Illinois State Horticultural Society.

[We are always glad to receive reports like the above. They have more than a local interest. Every man, of course, feels a special interest in what is going on immediately around him; but no sensible man will be contented to remain in ignorance of the progress that is being made every where in a pursuit which must necessarily occupy his daily thoughts. You must be careful not to run that willow in the ground—too much, unless it *will* make good sugar. Your wag no doubt has a "sweet tooth" in his head.—Ed.]

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## CUT-LEAVED BLACKBERRY.

BY S. B. P.

I NOTICE in your November issue a description of this new Blackberry, as it was seen in the grounds of Mr. Franklin at Riverdale. I can fully endorse all that has been said of it. My attention was first called to it several years since, grown on a trellis in the grounds of Captain Munson at Astoria. It had been then pruned to short

spurs, and the whole trellis was a mass of fruit, almost hiding the leaves. The berry was nearly as large as the New Rochelle, and, to my taste, of infinitely finer flavor, being very sweet; a quality that does not belong to the New Rochelle, except under almost impossible circumstances.

I have grown the New Rochelle many

years, and in very large quantities, and have not once had furnished for my table a quart of berries which I could eat with enjoyment. If allowed to hang until it would drop in the bowl with a slight touch, it is undoubtedly fine; but there is scarcely one servant in a thousand who will not pick it after it has become perfectly black, while its acidity is yet almost enough to make the blood creep. As I have no time to do the daily picking for my family, I have been compelled to pronounce the New Rochelle unworthy of cultivation for general purposes.

After seeing the *cut-leaved* in Captain Munson's grounds, I have cultivated it largely, not only for my table use, but to form a hedge for some acres of vineyard. Its uniform sweetness, high flavor, and wonderful bearing qualities, have pleased me more and more each year. As an orna-

mental plant, either for a hedge or for covering walls, I value it highly. It remains green till January; its sharp prickles will pierce the thickest pantaloons; it grows rapidly even in the poorest soil, and must inevitably grow in favor, because it combines in an unusual degree ornamental and fruit-bearing qualities.

[S. B. P. is not the only one who thinks highly of the *cut-leaved* Blackberry. The notice in our November number is not the first one that has appeared in the *HORTICULTURIST*. In our volume for 1861 will be found an exceedingly fine engraving of it, with an account of its introduction, and an estimate of its value for the table and for ornamental purposes. It is a very picturesque plant, and for some ornamental purposes has no superior.—ED.]

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## REPORT ON GRAPES.

BY H., MUNCIE, INDIANA.

THE soil is clay, freely mixed with vegetable mould. Two years previous to planting the vines, it had been trenched two feet deep, and freely supplied with well-rotted stable dung. The spring of planting it had been again stirred two spits deep; the spring previous it had been so freely supplied with fine, well-rotted dung, that none was now deemed necessary. The vines were from Dr. Grant of Iona, and were three years planted last spring, this being their fourth summer's growth. They had been freely cut back every season, and were last spring supplied with wire trellises running east and west. The trellises are nineteen feet apart, and the vines nine feet apart on the trellis, which was not all covered. The varieties were, one vine each Catawba, Isabella, Concord, Diana, Delaware, Anna, Clinton, Herbemont, Rebecca, and Hartford Prolific.

The season was peculiar. The winter had been open and mild. None of the vines except the Herbemont, which was

covered with earth, had any protection, but were all taken loose and laid on the ground. The spring opened early and fine. The summer was hardly wet, but we had hard rains so frequently, that at no time did crops suffer for rain a single day. Mildew was bad every where, and on almost every thing. In this vicinity the only grapes grown or in a bearing state, except mine, are Catawba and Isabella, with a few vines of Concord. Early in the season they were attacked with rot, and nearly all destroyed. I had no rot, but the foliage of my Isabella and foliage and fruit of my Catawba mildewed. By the time the fruit of the Isabella began fairly to color, the leaves were nearly all gone, and left the fruit hanging apparently sound. Some bunches would have a few grapes swelled to more than usual size, and ripening nice, while others were slightly colored, and others, again, entirely green; and thus they hung until frost, at which time a majority were somewhat colored, but not ripe, nor did they ever ripen. A

majority of the bunches would have a few ripe berries on, but a large majority of the berries were only colored, not ripe. Many did not even color, and thus they hung until the hard freezing destroyed them. When the berries were about half or two-thirds their size, the Catawba was attacked with mildew on leaf and berry. It did not get so bare of leaf as the Isabella, but by the time of ripening there were only scattering berries to ripen, and of those only a part ripened. Concord had but a slight appearance of mildew on leaf; none on berry, and no rot. Some bunches that lay on the ground neither rotted nor mildewed, but ripened perfectly. Diana mildewed on leaf about like Catawba, and worse on berry. Hardly had enough good fruit to judge the quality.

Delaware stood next to Concord in resisting mildew and rot, but a little later in the season had some mildew on the leaf, so as to lose about one-fourth its foliage. None on berry, and no rot, but from loss of foliage did not ripen well. Anna mildewed on both leaf and berry so bad as to destroy all the fruit. Clinton had no mildew on either fruit or foliage, but the leaf was attacked early in the season by some kind of insect that caused them to be covered with small humps. They did not appear to affect its health in any way. Herbemont, a trifle of mildew on the leaf late in the season, but none on the berry, which ripened well, and was highly prized by all who tasted them. It is a magnificent grower. Rebecca lost nearly all its foliage early with mildew, and left the fruit hanging naked in the sun until it shriveled and burned up; but very little of it ripened. None on berry. Hartford Prolific, a very little mildew on leaf late in the season; indeed, after the fruit was ripened. This grape hung on better, and after it was fully ripe was a better grape, than I had been led to expect. Yet, after all, its hardiness and early ripening are all that would induce me to give it room. Its native aroma or foxiness is so strong that it can be smelt at a distance of twenty or thirty feet from the vine by going into the

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garden of an evening after the fruit begins to ripen.

I have not attempted to fix any time at which any of these varieties ripened. It is obvious that, where the foliage was so extensively occupied with mildew as many of these were, it would be useless to note the time at which they ripened, as it would necessarily be much changed. The effect of mildew was very obvious on the ripening of the wood. Not more than half the summer's growth, on an average, ripened, and in this respect there was not the difference in the varieties that there was in the extent to which they were affected. The Herbemont and Hartford Prolific ripened their wood but little better than others that were worse mildewed. I had layered four branches of the Delaware, and each one had started roots at three to five joints; but still, when the foliage died, they rotted off.

I have quite a number of vines of the newer native grapes, on nearly all of which the mildew on the leaf was quite bad; in some, as the To-Kalon and Union Village, nearly destroying the vine. Louisa and Emily seemed to entirely resist it, retaining every leaf apparently sound, and ripening the wood to the tips. These two and some others will fruit next season, and I shall watch them with a great deal of interest.

Your "Hints" on the grape were not quite in time for my older vines, and I have to work them the best I can; but those not bearing yet I am trying to manage as you direct. If you have given the distance apart that trellises running east and west should be, I have failed to notice it. Mine are nineteen and twenty feet, and I think of putting another between. Would two between make them too close?

I suppose, before you close the subject, you will give directions for making wine.

I have but a small garden in which to experiment, and have not as yet planted more than one vine of a sort of the newer kinds. Of Delaware I have one dozen, (only one in fruit,) Catawba, Isabella, and Concord four to six each. In trying them for

wine, it will be necessary to keep each separate.

Now the question is, can I make wine, (*wine*, not cordial,) of so small a quantity, so as to be any reliable indication of its wine-making qualities?

[This report is the first from your section, and we have read it with much interest. You have had difficulties to contend with, but it is manifest to us that you are on the way to success. We see you observe the connection between mildew and the ripening of the wood, which many do not. Again, if the vine is deprived of its leaves by mildew or any cause whatever,

the fruit can not ripen. The time of ripening has little value unless the vines are in a normal condition. We have given the distances at which trellises should be placed. Two additional trellises would not make yours too close. Yes, we shall give the directions for making wine; and when we get you all well going, we shall be ready to "dissolve" into a "tasting society," to keep you up to a pure standard. You can very well test the wine-making qualities of your grapes as you indicate. As your vineyard is small, suppose you wash all your vines with lime water next spring *before* the buds begin to swell. We shall be glad to hear from you again.—ED.]

### THE PENN PEAR.

BY CHARLES DOWNING, NEWBURGH, N. Y.

DURING the past two seasons specimens of the Penn Pear have been kindly sent to me from Rev. Henry Ward Beecher, J. E. Williams, Esq., of the Metropolitan Bank, New York, and the Rev. A. R. Buel, of Bordentown, New Jersey, which promises to be an acquisition to the amateur, and may also prove a valuable market fruit. As it appears to be but little known, and deserving a trial, as I think, by all lovers of good fruit, I send an outline and description of it for the *HORTICULTURIST*, and also the following history by Mr. Buel:

"An old lady by the name of Mrs. Ellen Chambers, who is still living, and was brought up and lived in the Oliver family till the death of the last daughter, (some three years since, being then upwards of eighty years old,) says old Mr. John Oliver had two daughters, who lived and died in the house close to which the old tree still stands, and when these daughters were quite young, and on a visit to Burlington, ten miles below here, they brought home three pear seed, which they put in a box. One germinated. They kept it in the box for a couple of years, when they transplanted

it in the garden, where it still stands, or very near the place. When the Camden and Amboy Railroad was made, the tree, being on the margin of the road, was the cause of much dispute, the railroad company threatening to destroy it, etc.; hence it was called for many years the "Railroad Fuss" pear; but being so close to the grade, it slid down a few feet, where it still remains, bearing a few pears annually, being now upwards of sixty years old. The tree being opposite the old Penn Manor, and the Penn and Oliver families being very intimate, it was thought more appropriate to call it the 'Penn Pear.'

"There are three other trees of this variety in Bordentown, which were suckers taken from the original tree about twenty-five or thirty years since. One of them is in Mr. Frazer's yard, and is sometimes called the Frazer Pear.

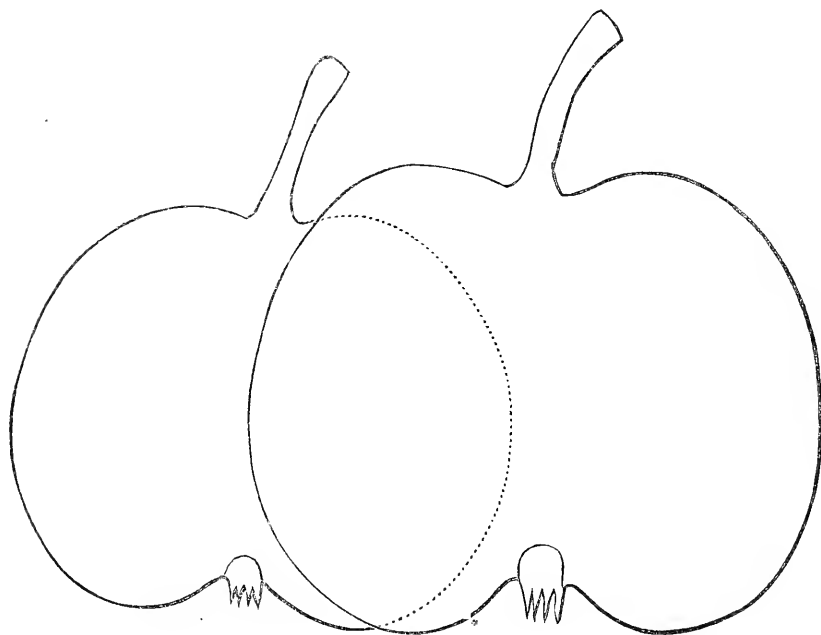
"It is a little remarkable that so fine a fruit should be so long overlooked and unknown, and also that it originated so near the celebrated Seckel, which is on the other side of the Delaware, but a little further down towards Philadelphia.



"The tree is vigorous, upright, and compact in form and growth, and somewhat resembles the Seckel, except that the branches are straighter. It yields abundantly every year, but every other year in excess, when the fruit is not quite so high flavored. It ripens gradually from early in October till the first week in November, and some seasons with care continues till Christmas."

a little coarse, very juicy, melting, with a sweet, pleasant, refreshing flavor, slightly aromatic, and a little musky perfume. "Very good." Core rather large, and a little gritty.

[We are much indebted to Mr. Downing for this history and description of the Penn Pear. All trees have a history; this one is by no means uninteresting. "Railroad



THE PENN PEAR.

*Frazer--Railroad Fuss--Butter.*

*Fruit* medium, oblate, sometimes roundish oblate, angular. *Skin* pale lemon yellow, thickly sprinkled with small greyish and russet dots, and sometimes a few patches and dots of russet around the calyx. *Stalk* medium to long, rather stout, slightly inclined, a little enlarged at its insertion, sometimes by a ring in a large uneven cavity, often in a slight depression. *Calyx* open, segments rather short, erect; basin large, deep, slightly furrowed. *Flesh* white,

Fuss" would have been an expressive name, under the circumstances, but by no means elegant or complimentary. Mr. Downing says in his letter, "I am informed that a few two year old dwarf trees of the Penn Pear can be had of a nurseryman in Bordentown, whose name I have not learned, but Mr. Buel can probably tell." Will Mr. Buel be so kind as to tell us? Two outlines are given, showing a slight variation in form. The largest outline is the usual form of the pear.—Ed.]

## SIX HARDY LILIES.

BY THE EDITOR.

WE have been requested by a lady subscriber to furnish a list of six hardy Lilies of easy culture. In doing this we hope to meet the wants not only of one, but of scores of our readers.

The whole Lily family is beautiful, from the modest little Lily of the Valley to the Gigantic Lily, which shoots its flower stalk 6 to 8 feet in the air. They are not only beautiful, but they are most of them of the easiest culture, simply requiring to be put in a good soil, tied to a stake, and kept free from weeds. Their easy culture, good habits, and abundant bloom fit them for the popular taste; some of them are worthy of a place in a garden of even the smallest dimensions, where nothing but choice things should be admitted. *Lilium candidum*, *Lilium tigrinum*, and a few others, are to be found in almost every garden, and others are fast finding their way there. Some of more recent introduction, such as the Japan Lilies, are of striking beauty, and greatly admired by all who have seen them. They are destined to become very popular.

To do justice to the Lily, each species, with its varieties, should form the subject of a separate article. We hope to treat the Lily in this way hereafter. At present we append a list of six, with brief remarks on culture. It must be borne in mind that those named are *species*, and that there are many *varieties* of some of them, these varieties, in many cases, being even more beautiful than the species. A single article will not admit of detail.

We place at the head of the list, 1. *Lilium lancifolium*, (*speciosum*.) Here it will be necessary for you to get varieties, and you can not do with less than three, though you will thereby exceed your stipulated number of six. These varieties are *album*, white; *punctatum*, white and pink; *rubrum*, blush and crimson. These Lilies are beautifully crested, and frosted, and spotted in a manner difficult to describe in few words. They are also very gracefully reflexed or recurved. The proper

time to plant them is in the fall of the year, though they may be bought in pots in the spring, and turned into the ground. The tops of the bulbs should be covered four inches. They will grow in any good garden soil, but the bloom will be better and the colors brighter if a little muck or charcoal is mixed with it. Only one bulb should be planted in the same place. New bulbs will form, and at the end of three or four years they may be taken up in the fall and separated. Oftener than this is not desirable. The ground should be kept loose and mellow, and the flower stalks neatly tied to a stake. They will grow three or four feet high, and sometimes higher. Besides the varieties we have named, there are many others of great beauty, but as yet high priced.

No. 2. *Lilium eximium*. The style of this is quite different from the last, having a long, tubular flower of the purest white, and quite fragrant. It is difficult to get it true to name, *Lilium longiflorum* and others being sold for it. It is a beautiful and very desirable plant, and is perfectly hardy. Any good garden soil suits it. It should be planted four to five inches deep. It increases rapidly, and may be taken up at the end of the third year and separated. It grows about two feet high, and will usually support itself. If stakes are used, let them be light, and as much as possible concealed, for they are always an eyesore, to us at least.

No. 3. *Lilium atrosanguinum*. The style of this is somewhat different from either of the above, the flower being open or saucer shaped, but not recurved like No. 1. The color is a beautiful orange red, prettily blotched. This, like the last, will grow in any good garden soil. It should be planted about three inches deep, and may be taken up and divided at the end of four or five years. It grows hardly two feet high, and seldom needs support. There are many beautiful varieties, but in nearly all a great sameness of color, the primary orange red prevailing. The plant is not common yet.

No. 4. *Lilium Martagon*. This is the well-known Turk's Cap Lily, so called because of the form of the flowers. It is very pretty and desirable. The color is a rich purple. It will grow well in any light garden soil. It should be planted about four inches deep. It grows from three to four feet high. It may be taken up and divided at the end of three or four years. There are several fine varieties, some of them being double.

No. 5. *Lilium candidum*. This is the common white garden Lily, but none the less pretty for being common. It grows well in any ordinary garden soil. It should be planted in the fall, and covered about four inches. It grows about four feet high. It may be taken up and divided every three or four years. There is a double variety, but the single is very much the prettiest, besides being cheaper.

No. 6. *Lilium colchicum*. This is somewhat rare yet, but it is beautiful, and deserves a place in every garden. It has turbinate flowers, like No. 4. The color is a rich yellow, spotted. It does well in a good garden soil, but is improved if a little sand and muck are mixed with it. It grows about four feet high. It may be taken up and divided every four or five years.

We have now completed a list of six Lilies that are hardy and easily cultivated. We could just as easily have made it a dozen or more without detracting in the least from its interest; for we have left entirely unmen-

tioned not a few of very great beauty indeed. Those we have mentioned, however, are probably the best six adapted to the popular taste and wants. They should all of them be planted in the fall of the year; the earlier the better. When the bulbs are taken up to be divided, this should also be done in the fall. By a good garden soil is meant a light, rich loam. Where sand and muck or charcoal dust are to be added, (and they can *always* be added beneficially,) a spadeful of each incorporated with the soil immediately around the bulb, will be sufficient. No coarse manure should ever come in contact with these bulbs. When used, it should be old, well decayed, and mixed with the soil. If the soil is stiff and clayey, it should be made light by the addition of sand, charcoal dust, decayed leaves, etc.

There are special means of culture, looking to a higher order of results, which we may refer to hereafter, for the benefit of those who can give the time and attention needed to enhance the bloom and beauty of these already beautiful objects. The directions already given, however, are all that are necessary to grow these Lilies in much perfection. Our favorite mode of growing them is in masses in beds. Any one who will grow them in this way in beds specially prepared for them, will be likely to exclaim, when he sees them in their full perfection, "Behold the Lilies, how they grow! Solomon in all his glory was not arrayed like one of these!"

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## DWARF PEARS.

BY WILLIAM BACON, RICHMOND, MASS.

It is now ten years since we commenced the culture of the Pear as a dwarf on the quince. At that time much was said to discourage the idea of success in the business, and since then there has not probably a year passed but that this method of fruit growing has been eulogized by its friends and anathematized by its enemies.

We have patiently heard and read the arguments in the case on both sides of the

question, all along during these ten years, and, like a Dutch justice of olden time, who, as the story runs, in a certain trial gave "both sides the case," we suppose both may be right in their experience, (we do not say practice.) Yet, while the aforesaid justice concluded the constable should pay the cost, we fall back on our individual experience, and say that, with us, the trees have paid all costs, including expense of themselves, land

rent, preparation of soil, after culture, indeed all the care bestowed upon them a hundred fold, and promise, if we do fairly by them, nothing more, to continue their remunerative labors for years to come.

Since our dwarfs were set out we have had many severe winters. At that time, the Peach and Cherry were doing well. We had fine crops of Peaches until 1855. The following winter was so severe as to greatly injure them, and that of 1856 completely destroyed them.

The winter of 1860-61 will long be remembered for its sudden changes of temperature, and the extremes incident to those changes. Cherry trees were in many instances killed, and in nearly all so debilitated that many of them never recovered from the shock. In some localities Apple trees suffered, and we knew instances where our native forest trees found the shock too great for them. Some of our dwarfs suffered in their young wood from the vicissitudes of these winters, but none of them were lost. Not so with our standard trees. A small percentage of them were killed beyond the resuscitating influence of spring. So we conclude, that in the matter of hardiness they are fully equal to standard trees, and, indeed, to any of our most hardy fruit trees.

That we have suffered some losses in these trees we admit. If we were to commence their culture with our present experience in the matter, we feel confident we could save nine-tenths of such losses. We had some varieties that do not succeed well on the quince; these, of course, failed. Another error we committed was, in not setting some of our trees deep enough. In our present or future practice, we hold it important to bury the quince stock entirely, and a portion of the pear, that roots may be thrown out by the latter. We came near losing a fine Napoleon by a partial failure of the quince, but, on examination, we found a few fibers started from the pear. The tree was taken up and a new setting given, burying the pear still deeper, and now it is a fine, thrifty tree. And here we

find an objection to many of the dwarfs brought into market. They are grafted so high on the quince that a long, unsightly shank of the stock is found between the roots and the graft, and to set them so low as to have a proper portion of the pear covered, would be placing the roots further down than the ordinary working of most soils would warrant, and much deeper than the roots of any young tree should be set. Nurserymen should work their stocks lower, even if they charge more for doing it, and purchasers should reject all trees that are not worked near the ground.

Our dwarfs have not been troubled with the borer at all. The only insect we have had to contend with was the bark louse, which planted themselves upon our trees so as almost to cover the bark. The remedy we applied was summary and effective. The trees were thoroughly scraped with a dull knife, care being used not to injure the bark; and after this the trees were thoroughly washed with a strong ley, which seemed to neutralize the poison deposited in the bark by the louse, and restore the tree to healthfulness.

From our own experience we do not consider dwarf pear culture a failure, or by any means a humbug. It may not succeed in every soil, or in all localities. There is no crop, not even the most common one, that will; and in order to be successful in growing any tree or plant, we must adapt the soil, if nature has not done it, to the nature and habits of that plant, no matter how simple the habits of the plant may be. A burdock or a thistle, we are all aware, will grow in almost any dry soil, yet who has not seen that they are much more luxuriant in one that is deep and fertile; so with dwarf and other trees. They will starve and die in the very soils which, if duly prepared, would give them health and vigor. The trees are not to blame for this, neither are the nurserymen who propagated them. Nor is the fact that they are dwarfed on the quince, with many varieties, any obstacle to their success, but, on the contrary, it is an improvement in the quality of the

fruit; the trees early come to maturity, and, as far as our experience goes, are as hardy as standards, and, what is a consideration of no small account, the trees are mainly so low that worms' nests are easily destroyed, and the fruit can always be gathered by hand without the risk of high climbing, while at the same time it is less likely to be blown from the trees by the high winds to which nearly all our country is subject.

[Mr. Bacon's excellent article comes to hand very opportunely. Read in connection with our leader, it will be a great encouragement to those about to plant Dwarf Pears. Thus, without knowing it, he has

materially aided our efforts, his article having come to hand just as we had completed our own. We have lately had so many inquiries in regard to Pear culture, that we have determined to furnish our "Hints" faster than we originally contemplated. The subject has been too much neglected of late. If your standard Pears had been branched low down, do you think they would have sustained as much injury as they did? We endorse heartily all you say about working dwarf pears too high. It is in some respects a serious evil. We agree with you, too, that when dwarf pears fail, it is not always the fault of the trees.—Ed.]

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## CIRCULATION OF THE SAP.

BY B. A., PASSAIC, N. J.

This paper in your last number suggests a fact with which some of your readers may not be acquainted.

Cover the lower end of a tube, water tight, with a piece of bladder or other membrane. Fill the tube partially with a dense liquid, as sugar and water. Place the tube upright into clear water, or into water with less sugar. The denser liquid will draw the lighter liquid into the tube, and it will gradually rise until it will run over the top. This is called *endosmosis*, or going within. If the denser liquid be outside, it will draw the lighter liquid out of the tube. This is called *exosmosis*, or going out.

A plant is a collection of tubes. Each minute tube is divided into a succession of cells, by membranous diaphragms. The evaporation from the upper part of the plant renders the upper part of the sap

more dense than the lower. Endosmosis causes the sap to pass each diaphragm in succession, as it rises towards the top of the plant against the force of gravity. The sap is kept in its regular channel by the walls of the tube. Some physiologists maintain that each leaf has its own distinct tube from the root.

[B. A., being a man of science, likes to account for facts on scientific principles, in which we agree with him. The above theory accounts for the rise of the sap in a satisfactory manner. If we remember rightly, it is the theory advocated by Jussieu, and, according to our apprehension, it is strictly philosophical. We have other articles on the subject, one of them being from Mr. Taylor, which will appear in our next.—Ed.]

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## HALE'S EARLY PEACH.

BY A. G. HANFORD, COLUMBUS, OHIO.

A FINE early variety, originated by a German at Randolph, Portage Co., Ohio. It was first brought to notice by Mr. Hale, a

nurseryman of Summit Co., who introduced it as Hale's Early German. Subsequently the "German" was dropped from the name.

In the spring of 1859 it was sent out from the Columbus Nursery. Prior to this it had been placed in the hands of a few amateurs and others for trial, and had been moderately disseminated in the vicinity where it originated. The past season we have had reports from these trees, uniformly sustaining its high character.

It is a white-fleshed, free stone peach, rather larger than Serrate Early York, ripening seven to ten days earlier. Its color, form, and quality more like George the Fourth. Fruit always fair. The tree

is a remarkably handsome, vigorous grower, hardy and healthy. Its productiveness remains yet to be fully established. An orchardist near Chillicothe, who has about two acres of Hale's Early, reports a portion of his trees as bearing very full. Others speak of moderate, even crops. The trees are all young yet, and it is too soon to expect a large yield.

[This Peach we have not seen. We are obliged to you for an account of it. We have just received another from Dr. Taylor.—ED.]



## THE FLEMISH BEAUTY PEAR

BY A. G. HANFORD, COLUMBUS, OHIO.

DURING a visit to Waukegan, Ill., we were much pleased with the appearance of the Pear trees on the grounds of Mr. Robert Douglas. The history of one, a Flemish Beauty, I send you. It was planted in the spring of 1852, then two years from the bud, commenced bearing the third or fourth year, and has yielded well every season since except the past.

In 1860 it produced twelve baskets of fruit, which sold for thirty dollars; in 1861 fifteen baskets, for which thirty dollars was again realized. The past season the tree was injured by a tornado, nearly half its top broken off, and most of the fruit blown from the unbroken parts; three baskets of very fine fruit were, however, gathered from the lower limbs, fifty pears filling a basket. The tree is now full of promise for next year. Two other trees of the same variety, but smaller, standing near this, have done quite as well in proportion to their size, together giving nine baskets the past season.

The Flemish Beauty is a favorite in the Northwest, seemingly as much at home as the Burr Oak, enduring the severest winters uninjured.

We have noticed lately that it is recommended by some of our Eastern friends to be grown on the quince. One eminent horti-

culturist is *reported* to have said, at a meeting of the Brooklyn Horticultural Society, that the Flemish Beauty should be grown only on the Quince. Our experience with this variety would lead us to advise its culture *only on the pear*. It is true, it sometimes does well on the quince, but it more frequently fails; and then it comes into bearing so soon on its own root, there is little need to dwarf it.

[Some horticulturists about here recommend the Flemish Beauty to be grown on the quince, because they find it, when carefully worked, to succeed well. Many of the finest specimens of this pear that we have seen were grown on the quince. The gentleman alluded to probably did not state the case so broadly, though we know he strongly recommends the Flemish Beauty to be grown on the quince; and his own trees, and others about here, would seem to warrant him in so doing. We think the Flemish Beauty will succeed better on the quince than is generally supposed. It is quite true, however, that, except for gardens, there is no special necessity for dwarfing such kinds as come early into bearing, unless the size and quality of the fruit are improved thereby, which is the case with some. What is your experience in regard to other kinds on the quince?—ED.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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WE are very much crowded this month, and consequently compelled to omit some of our best articles. They are good enough not to spoil by keeping.

TO SUBSCRIBERS.—In answer to many inquiries, we will state that any of the following volumes, 1854, 1855, 1856, 1857, and 1860, 1861, 1862, unbound, can always be counted in clubs. In making up clubs, therefore, four copies, one year, \$6 00, and eight copies \$10 00, the magazine for any of these years can be reckoned in with the present year. If the volumes are bound, 50 cents additional must be added. The postage on unbound volumes is 18 cents, (for 1863, 12 cents,) on bound volumes, 40 cents each. If any member of Clubs already sent in desires any of these back volumes, he will be furnished at the club price, as additions to clubs at the club rate is our rule. Those who have subscribed for 1863 are entitled to the balance of our seven dollar set, 1860, 1861, and 1862, all bound, on remitting five dollars. These contain the whole series of articles on Grape Culture, Landscape Adornment, etc. The club rate of \$1 25 per copy for clubs of eight, will be discontinued after the 1st of March, 1863. After that date the lowest club rate will be \$1 50 in clubs of four or more. We can furnish six sets, from 1854 to 1863 inclusive, being volumes IX. to XVIII., ten volumes in all, for \$12 50, unbound, or \$17 50 bound. Two sets of ten volumes, bound and slightly shelf worn, for \$13. All the volumes are bound alike, and present a uniform appearance on the library shelf.

Covers for binding for 1862 and for former years, sent post paid on receipt of 30 cents each. We prefer Treasury notes, Postal currency, and new three cent stamps—no corporation shinplasters.

CORRECTION.—In *El Medico's* last article, Rogers's Hybrid No. 17 should read, Rogers's Hybrid No. 19. It will be important for the reader to bear this in mind.

NURSERY OF THE LATE MR. REID.—We are very glad to learn, by our advertising columns, that the business of the late Mr. Reid, of Elizabeth, N. J., is to be continued permanently. The suppression of such an admirable nursery, with its large and valuable stock of choice trees and plants, would have been a serious loss to the community. The nursery will hereafter be conducted by Mr. David D. Buchanan, (Mr. Reid's son-in-law,) whose previous knowledge of the business well fits him for the position. We are familiar with Mr. Buchanan's promptness and integrity, and have no doubt that the high reputation of the Elizabeth Nursery will be fully maintained under his superintendence.

TAGLIABEAU'S THERMOMETERS.—We often have inquiries from gardeners and others for reliable thermometers. We have latterly used Tagliabeau's, which are of excellent workmanship and the utmost reliability, the latter quality being all-important, and often wanting in ordinary thermometers. We lately got one of him of great delicacy and beauty, being graded to quarter degrees. His self-registering thermometers are much

the best we have used, and are those which we generally recommend. No gardener, at least, should be without a good self-registering thermometer.

THE RURAL ANNUAL FOR 1863.—This is a useful little compilation for the farmer and gardener, containing articles relating to the orchard, the cultivation of Hops, the management of manures, small fruits, cheap cottages and farm houses, and many other subjects. It is published by Joseph Harris, at the office of the *Genesee Farmer*, Rochester, N. Y. The price is twenty-five cents.

DEATH OF DR. BRINCKLE.—We are pained to learn of the death of this distinguished horticulturist. He had been in feeble health for a long time, and his friends were not unprepared to hear of his death at any moment. We had known and corresponded with him for many years. He was a man of deep refinement, very amiable, learned in his profession, a most devoted and zealous amateur horticulturist, and beloved by a large circle of friends. His life was eminently a useful one. He took a prominent part in the proceedings of the Pennsylvania Horticultural Society, and was a leading member of the American Pomological Society. Of the former he was at one time President, and of the latter a Vice-President.

Horticulture was much indebted to Dr. Brincklé, and will give him a chief place among those whose memories she preserves.

RUST ON VERBENAS.—We regret to learn that this disease is very prevalent this winter, many large growers having already lost most of their stock. It is a matter of grave importance. We should be glad to have Mr. Henderson, Mr. Snow, Mr. Dingwall, and other large growers, give us their experience in this matter, and the best mode of treating the case. If it continues to spread, Verbena beds will soon become a rare sight.

A NEW SEED STORE.—We learn that Messrs. Fleming and Davidson have opened a new seed store at No. 67 Nassau Street, N. Y. The former has been for several years with Mayor Van Vorst, of Jersey City, and the latter quite as long with R. L. Stuart, Esq., of this city. They have both attained a worthy place in their profession, being well known as skillful gardeners. The same integrity and application will no doubt secure for them success in their new vocation.

II. B. Lum, Sandusky, Ohio.—Illustrated Catalogue of Flower Seeds, Cuttings, etc., containing all the best novelties, which may be safely sent by mail.

## CORRESPONDENCE.

YORKVILLE, Jan. 13, 1863.

PETER B. MEAD, Esq.—*Dear Sir*:—I inclose a transcript from a letter lately received from my brother, Mr. Thomas Hogg, dated Kanagawa, Japan, Oct. 23, 1862, which may be of interest to some of your readers.

He arrived out from San Francisco on the 22d of August last, after a very stormy and disagreeable passage of fifty-four days.

I am this day in receipt of another letter, dated Nov. 10, 1862, informing me of the shipment of the first instalment of his collections, which of course embraces many valuable novelties. Among them are *Abies*

firma, which he writes is the same as *A. bitida*, the latter being the form it assumes in its younger growth; *Abies Veitchiana*, and *Teuga*; *Sciadopitys verticillata*, *Pinus Koraiensis*, *Picea pichita*, two new species of *Larix*, five new varieties or species of *Retinospora*, besides *R. pisifera* and *squamosa*, *Thuja Nutkaensis*, (?) of a drooping habit, very similar to the one we have as *Thuja plicata*, or *Nutkaensis*; *Thuja Japonica*, which bears some resemblance to *T. Sinensis*, but is of a denser habit, more like *T. aurea*; three new species of *Magnolia*, *Stuartia monadelphica*, *Styrax obassia* and *S. Japonica*, *Planear*



acuminata, four varieties of Persimmons, some new and beautiful Iris, etc., etc.

He is in good health and spirits, and highly delighted with the vegetation and floricultural products of the country. He has already formed some acquaintance with some of the native gardeners, and enlisted them in his service in procuring or obtaining new and rare things for him. Some of the seeds now on the way, were collected for him at Fusi Yama, by a Japanese gardener. I remain yours respectfully,

JAMES HOGG.

*Extracts from Letter of Mr. Thomas Hogg.*

"The few days of my visit to Yedo did not afford me much of an opportunity of seeing the country. Not having a horse, I went up in a boat, and my time during the visit, when not at home, was mostly occupied riding about the city. I had proposed riding out to see some of the gardens, but other visitors came up while I was there who were more interested in the city than the country, so that my visits to the gardens were necessarily deferred until another time.

"I had one ride a short distance in the country, and was highly delighted with the novelty of the vegetation around me, and at the same time recognized many familiar things that made me feel quite at home. Cryptomerias are very abundant, and are systematically planted for their timber. Camellias, Azaleas, Salisburias, Euonymus, Wistarias, Hydrangeas, Podocarpus, Deutzias, etc., are all very common, as also many exotic plants that I was surprised to find. In the garden of the temple of Osacksa, one of the largest temples in the place, I found growing in pots quite a lot of things such as we cultivate: Ixoras, Vincas, Asclepias, Orchids, (some with variegated leaves,) Gardenias, (G. radicans, with beautifully variegated foliage,) and other things, the names of which I do not now remember.

"The Tycoon's residence is in the center of the city, and is surrounded by a wide moat, embankments, and walls, as occasion renders necessary. The moat surrounds it

entirely, and in some places is covered with blue and scarlet Nelumbiums and Nympheas, and other beautiful aquatics. In some places the embankments are very high and finely turfed, and present a fine appearance. Surrounding the imperial residence are the residences of the Dai-mios, looking like long rows of barracks or prisons. The only interesting part of them are the gateways, which are sometimes very massive, and not devoid of architectural beauty.

"Outside of the streets occupied by the Dai-mios, which form quite a city of themselves, live the people generally; and such a mixture of shanties, shops of all kinds, from corner groceries to silk stores, tea houses, soldiers, beggars, dogs, and unclean smells, you never witnessed or experienced. The streets are narrow, and mostly unpaved, or rudely covered with small stones, so that in wet weather they are rather muddy.

"The people generally are very cleanly, and certainly affect a Spartan simplicity in their dress and mode of life, especially the coolies or laborers, who in warm weather usually content themselves with a breech cloth, after the manner of Sandwich Islanders in the olden time. Occasionally, and not uncommonly, they put over their bodies, more particularly their backs and shoulders, a light summer dress, (which also serves for an under garment in the winter,) composed of tattoo of elaborate pattern, warranted not to fade either by washing or exposure to the sun.

"On my return from Yedo, I came by what might be termed the shore road, following the bay. It is quite level nearly all the way, and thickly inhabited. The land is swampy, and nearly all cultivated in rice, of which immense quantities are grown of a very superior quality. The flat lands extend to the distance of about half a mile from the bay, when the ground becomes suddenly elevated. On this high land there is another road to Yedo, called the country road, which is said to be very beautiful.

"The roads about here are mostly simple paths, only sufficient for traveling singly; but the most disagreeable feature is the abominable smell arising from the manure, which is

saved from every dwelling, and carried about the country in open tubs.

"Their vegetables are generally very inferior; and as yet you see but little improvement produced by the large quantities of seeds that have been distributed. A small variety of the Egg Plant is grown largely. Potatoes, and Sweet Potatoes, a long White Turnip, (about as long as a Parsnip,) and others are extensively cultivated, but inferior to those you have. Potatoes are not bad flavored, but are small; the finest come from Hakodadi. There is a Squash grown here that is very fine, and really worthy of notice.

"The variety of fruits is very limited. Watermelons were plentiful in their season, and Peaches were in moderate quantity and of good size. Both looked as if they would be very good, had they been allowed to mature before picking, but the Japanese have an inveterate custom of picking and eating fruits while quite green. Grapes are also very good, and are quite distinct from our native varieties in not having downy leaves. They are about the same color as the Diana, with a loose bunch similar to the Catawba, and of a sweet, pleasant flavor, with very little acidity in the skin. I think it will prove a valuable addition to our list of fruits.

"The peculiar and characteristic fruit of the country is the Persimmon; not like the notable fruit of that name, known in North Carolina for feeding very hungry folks; but, like many other things here, entirely the reverse of what it is with us. It is a substantial looking fruit, yellow when ripe, as large as a medium sized orange, with a delicious sub-acid pulp, eaten with a spoon.

"No longer let Persimmons be a by-word of all that is distasteful and puckery; but let it have an honorable place among the fruits of the earth suitable for man. The tree is very ornamental when laden with fruit. It is as far different from our Persimmon as a Bartlett Pear is different from a choke Pear.

"Coming here so late in the season, I have not had the gratification of seeing many native plants in flower, and must wait another year for that pleasure. The variegated foliage plants, seemingly so peculiar to the country,

are really wonderful; even plants not natives of the country partake of the general tendency in that direction.

"The number of native plants with variegated leaves is surprising. Camellias, Aucubas, several forms; Ardisias in a great variety of ornamental foliage; Podocarpus, Osmanthus, Eurya, Serissa, Junipers, Farfugium grande, silver-edged; Cryptomerias, Retinosporas, Kadsuras, Clevera, Corchorus, Rhynchospermum, Viburnum, Ligustrum, Thujiopsis, etc.

"There is a Russian Botanist (Mr. Macimovitch) now here making a collection of living and dried plants for a Society in St. Petersburg. He has been in the country three years, and is now about returning home by the way of Nagasaki. He has been very industrious, and has procured many valuable things. I frequently call upon him, and find him very communicative, and have obtained much valuable information from him."

[The above extracts will be read by Mr. Hogg's numerous friends with much interest. Aside from the deep personal regard we entertain for Mr. Hogg, we experienced no small degree of pleasure when we heard of his determination to go to Japan. We knew that he possessed knowledge, enthusiasm, and perseverance to a degree that eminently fitted him for a collector of plants, and we have no idea that we shall be disappointed in our expectations that he will add very materially to the richness and variety of our collections. These extracts give the reader a good idea of his industry. Nothing that is really good will be likely to escape his eye. This communication reaches us just as we are making up our last form; but we omit other matter to make room for it, and reserve comment for a future occasion.—Ed.]

PETER B. MEAD, Esq. :—*Dear Sir,*—As a beginner in the cultivation of fruits, I have read the *HORTICULTURIST* for the past year, and the spirit (of love for that pursuit) moves me to acknowledge the gratification I have felt with the ability and discretion with which

it is conducted. By discretion, I mean the care which you show in refusing to recommend any new fruit until you are certain of its merits. This editorial virtue can not, in my judgment, be too highly commended. The most vexatious of all trials is to read some fulsome puff of a new fruit, purchase it at a high price, cultivate it two or three years or more with great pains, and then find it worthless. There is no protection from this very prevalent and increasing kind of imposition, except the reading of some reliable Horticultural publication, which stubbornly refuses to puff a fruit until its excellence has been fully established by actual experience.

I was very favorably impressed with the good sense of Mr. Bacon's article on Orchard Culture in the December number. I see you do not agree with him in regard to cultivation after the trees are set. Experience in this section has shown that there is a good deal of truth in what Mr. Bacon says. We have some extremely cold weather here every winter; the thermometer sinks to between 20 and 30 degrees below zero. If trees make a very large growth, they are very apt to be winter killed, on our rich soils. Cultivation is sure to produce this growth; hence the value of stocking down to check the growth within moderate limits. If stocking down should stop the growth, it would, of course, injure or destroy the orchard; but all that is desirable or safe is a moderate growth of well-ripened wood; and on our rich soils here trees will make enough growth if the land is seeded down. I think you state it too strongly, when you say, young orchards ought *always* to be cultivated. You seem to think the apple tree is so hardy, that there is no danger from a too luxuriant growth. This is a mistake; there are many kinds of old standard apples which are hardy and productive at the East, that are certainly destroyed by our winter; among them are the Rhode Island Greening, Spitzenburg, and others. If an orchard is stocked down, and does not make a good healthy growth, top dressing, as stated by Mr. Bacon, is a sure remedy.

What do you think of Mr. Phin's book on Grape Culture? In one number you acknowl-

edge the receipt of it, and promise a review, but have neglected to give it. I am anxious to know what you think of it. I sent for a copy a short time ago, and expected to acquire from it all the information I desired about the mode of propagating, culture, qualities, time of ripening, and the peculiarities of all our native grapes, about which so much is being said; but what was my surprise to find that the author knew absolutely nothing about them, or, if he does, has failed "to make any sign in his book," of such knowledge. It is true, he describes several elaborate modes of training vines in Europe and in graperies, but are they adapted to the outdoor culture of your natives? has the author tried any of them, and which is the best? The book gives no response to these questions. I want to propagate some vines by layering. The mode is hardly alluded to.

But my disgust was complete when I read the chapter on varieties. So far as we can know from the book, Mr. Phin has never seen any of the natives, except the Isabella, which he recommends as the grape *par excellence* for general cultivation; and estimates that it will be well enough "*to try a vine of the Delaware by way of experiment.*" All his descriptions of varieties are borrowed. Is not the book "a big bit of a humbug?"

The Report by Pratiquer is admirable; it is worth the price of the volume. If we could have more such reports on fruits by intelligent cultivators, it would add, for new beginners like myself, almost incalculable value to the HORTICULTURIST. By-the-way, why could you not, Mr. Editor, have given us a little definite information of the new fruits, time of ripening, etc., which you saw at Newburgh Bay? We should have been grateful for it.

Yours truly, INQUIRER.

*Southern Wisconsin, Dec., 1862.*

[We thank you heartily for your appreciation of our labors. Such commendations will stimulate us to further efforts to make the HORTICULTURIST still more useful and reliable. Our "editorial virtue" we shall strive above all things to keep pure.—Mr. Bacon's

article is certainly an excellent one. If you read our remarks again carefully, you will see that we do not differ very widely from Mr. Bacon. In penning our remarks, we had in view Mr. Bacon's section of country, (New England,) where we find prevalent a great neglect of orchards, which we have often heard excused on the plea that nature never cultivates trees; and we had no idea that Mr. Bacon should fall into the hands of these men, if we could help it; hence the pertinence of our closing sentence. We admitted, however, in our remarks, all the danger you impute to a too luxuriant growth. We have a number of times stated our conviction that your rich Western soils are much concerned in the winter killing of your fruit trees. It is just as you state it: the growth is so luxuriant that the wood ripens imperfectly, and is consequently winter killed. How to prevent this is the question. As we wish our readers to understand fully our views on Orchard culture, we will give a summary of them in our next issue. We have not half room enough for our correspondents even this month.—We had partly determined to defer a review of Mr. Phin's book until we had completed our own grape articles, simply, however, on the score of delicacy. Mr. Phin has by no means exhausted the subject. His chapter on varieties is exceedingly unsatisfactory. We shall hereafter speak of the merits as well as the faults of the book.—Pratiquer reads the *HORTICULTURIST*, and practices what he learns. We are forming a regiment of such, with Pratiquer for Colonel.—We have had in type for two months several pages of matter relating to the fruits at Newburgh and elsewhere; but our printer "don't get it in."—ED.]

*Messrs. Editors*,—A sentence in the lively article of *El Medico*, in your last number, recalls to me a duty that has been some time in

my mind, in reference to the Coleman's White grape. The grape which they have at Cincinnati, and which has been distributed from there under that name, is not the Coleman's White, but the Cuyahoga. Esqr. Coleman told me that the cuttings he sent to Mr. Longworth were not from his own vine, but from the vine of Mr. Wemple, which was the original Cuyahoga; and that, when he found that Mr. Longworth was calling it the Coleman's White, he either verbally or by letter protested against it. The true Coleman's White has not been disseminated out of this vicinity except by myself, and that to a very limited extent for the last two seasons. It is a larger berry, darker color, thicker skin, tougher pulp, and much stronger native aroma; more like the few specimens I have seen of the Cassiday, which probably were not a fair sample of that variety. I do not consider it of any special value, unless it should prove of some value for wine.

A word to *El Medico*. Are you sure your Diana is *true*? Around Cincinnati there is a variety called Diana, now generally called Werk's Diana, which I am fully persuaded is not *true*, and by which, by-the-by, I have been pretty badly *bitten*, and which you were still inclined to think a year ago was the true. The true Diana I think very variable; this season I thought mine almost equal to the Delaware; last season I thought them hardly second rate. But enough.

Yours very truly, EDWD. TAYLOR.

[We have had intimations from other quarters that the Cuyahoga was being sold at Cincinnati and elsewhere for Coleman's White, but these intimations have assumed no definite shape until now. The dissemination of a grape under a wrong name should not be persisted in, even though, as in this case, the substitute should be the better grape of the two. Our friends at Cincinnati, who are noted for their carefulness, should give this matter a thorough sifting.—ED.]

#### PRESIDENT WILDER'S ADDRESS.

*Concluded from page 40.*

The cultivation of fruits, as a science, is one of the most interesting and delightful

that has ever occupied the attention of man. It furnishes an endless variety of

objects for contemplation, constantly exciting his wonder, and leading forth his soul in admiration of the providence, wisdom and goodness of that Almighty Hand, which bespangles the heavens with radiant orbs, and carpets the earth with living gems no less brilliant or wonderful. Whether we study the canopy above, or the carpet beneath, we are filled with admiration at the order and infinitude of His works,

"A world of beauties that throughout their frame,  
Creation's proudest miracles proclaim."

The more, therefore, we instil into the minds of our youth the love of our delightful art, the more will they appreciate the wisdom, beauty, and perfection of the external world, and the more will their souls become invested with that purity and refinement which enlarges the sphere of social happiness, and elevates the mind to contemplate with reverence and delight that Infinite Source,

"Which sends Nature forth the daughter of the  
skies,  
To dwell on earth and charm all human eyes."

When our work on earth is finished, how precious the monuments which this art rears to perpetuate our memories! It was the custom of some of the ancients to bury their dead under trees, so that future generations might sit over their graves screened from the parching heat, and to dedicate fruits and flowers to distinguished men.

What an honorable testimonial to have a luscious fruit dedicated to your memory—a fruit which shall bear the name not only of yourself, but of your family long after you shall have been buried beneath the sods of the valley! How transporting the thought, that future generations will sit under the cooling shade of the tree reared by your own hand, and regale themselves with its precious fruit! Think you not they will shed the tear of gratitude, and bless the hand that planted it! How chastening the anticipation, that when we shall have been gathered to our fathers, and these frail tenements are consigned to the bosom of our mother earth, the particles of our bodies shall be regenerated and reappear in the

more beautiful forms of fruit or flower, and shall thus minister to the comfort of generations to come. Oh! let me be remembered in some beautiful flower, some graceful tree, some luscious fruit. Oh! yes, far better than storied monument or sculptured urn, let me be remembered as one who labored to adorn and improve the earth, to promote the pleasure and welfare of those who are to follow me.

In creation there is a wonderful fitness between the native instinct of man and the object of his attachment. Thus God gave us trees adorned with inimitable beauty, "pleasant to the sight and good for food." Thus we have the tree of knowledge and the tree of life, symbolic sacraments of the patriarchal Church. Witness the inherent love of these in Abraham, when he said, "Let us have all the trees that are in the field, and that are round about;" in Solomon, planting orchards and vineyards, and classing these pursuits "among the delights of the sons of men;" in our immortal Washington, retiring from public life to sit beneath the shades of Mount Vernon; in Rousseau, longing to be laid under his own favorite tree; in Temple, directing that his heart should be buried beneath the trees of his own planting; and in the untutored Indian, who, beholding a tree of his native land, sprang forward with one joyous bound, exclaiming, "O tree of my home, welcome to my heart." So does the human soul sympathize with the objects of nature.

#### CONCLUSION.

GENTLEMEN: It has been my desire, and my custom, on these occasions, to confine my remarks to subjects strictly connected with the objects of our Association, to unite my rejoicings with yours in the progress of the past, and to look forward with cheering hopes to the future of our favorite art. But this calling, our homes, our institutions, and all we hold dear and sacred on earth, are so involved in the civil conflict in which our country is now engaged, as to demand, in conclusion, a passing notice.

Accustomed as we have been, for half a

century, to the enjoyment of uninterrupted peace with transatlantic powers, to the contemplation of the prosperity and rising greatness of our Republic, and to the belief that the very name of war was fast becoming obsolete, we find it impossible to comprehend the gigantic proportions and ulterior influences of that dreadful evil which is upon us, and which has taken from the peaceful pursuits of active life two millions of our fellow-citizens, and plunged them into the most dreadful and bloody conflict, which has suddenly, as by the stamp of Ajax's foot, raised up a Navy second to no other on earth, and which has concentrated the astonishing improvements of the last half century in machinery and progressive science for the relief of human toil and the happiness of man, into the single art of his destruction by war.

At a crisis so momentous and fearful, involving our existence as an independent and united people, and our relation to every other nation under heaven, our paramount duty is plain. We must support with all our means that good government which the patriotism and wisdom of our fathers established, and which, after every effort to avert the evil, is compelled to robe even her white-winged messenger of peace in the fiery habiliments of war for the preservation of the Republic and the enforcement of its laws. We must hold on to the Constitution as the very palladium of our liberties, and the sheet anchor of our hope. We must frown upon every attempt at insubordination and fanaticism to invade our rights, and having done all, we must stand by the flag of our Union. Yes, stand by those glorious stars and stripes, which, for more than fourscore years, have waved over the land of our birth, and the cradles of our infancy. Stand by this flag, whose every thread is luminous with the history of our Nation's greatness. Stand by that flag, which has floated in the breeze of every sea and clime. Stand by that flag, the harbinger of civilization, and the herald of sal-

vation to the distant isles of the sea. Stand by it, as the emblem all that is great and good in the history of the past, or the dearest hopes of the future. Stand by the flag of our Union, in prosperity and in adversity, in life and in death—here and every where—now and forever.

The cloud that overshadows is indeed dark and foreboding, yet we trust it will retire gilded with the bow of promise, and radiant with the hope of a brighter to-morrow. We believe that He who rules in mercy as well as in justice, will in the end bring our beloved nation out of all its troubles, and make us a wiser and better people; that He will yet make us one in interest and destiny, a people whose love of self-government, union, and strength, shall, in the future as in the past, be the wonder and admiration of the world. Terrible as this crisis is, we doubt not that the progress of this great Republic is to be onward and upward in the cause of freedom, civilization, and humanity, and in all that tends to the development of the comfort, happiness, and perfection of the human race. Yes, we fondly cling to the hope that the day is coming yet, when war shall wash his bloody hand and sheath his glittering sword; when our fields shall no longer be plowed with the deadly cannon, or fertilized with the blood of our brethren; and when peace shall again wreath her olive leaves around these distracted States, and bind them together in one great circle of life and love. The night is dark, but the morning cometh. That golden age is "coming yet."

"Its coming yet for a' that,  
When man to man the world o'er,  
Shall brothers be for a' that."

To this delightful result our chosen art is to contribute its full share; and when it shall have accomplished its whole mission on earth, our orchards and gardens will be crowned with the choicest fruits of Pomona, our hill-sides rejoice in the rich burden of the vintage, and man at last, as at first, enjoy the fruition of Paradise on earth.

THE  
HORTICULTURIST.

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VOL. XVIII.....MARCH, 1863.....NO. CCI.

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*Hints on Grape Culture.*—XXIII.

WE have brought the vine up to the end of the third or the beginning of the fourth year. Let us pause for a moment, and examine the appearance of the vine. To aid us in this, we have prepared an engraving of the appearance of the vine after the pruning directed in our last article; for we wish the reader to comprehend the subject fully as we go along. The end canes have been pruned and laid down to complete the arms; the upright canes on the arms have been pruned to three buds; and the two middle canes,\* *i* and *k*, have been pruned to one bud. These operations completed, the vine will have the appearance indicated in the engraving, the buds on the under side of the arms having been rubbed out, as before directed. We think this makes the subject so plain that it can not fail to be understood. The engraving is drawn to a scale of half an inch to the foot.

Let us now turn our attention to the routine of culture needed during the fourth year. Let us suppose it is early spring. The vines have been pruned, and are in their winter quarters. The first thing to be done is to uncover the vines, (in case they have been covered,) and place them on the trellis. As we have remarked before, this should be done before the buds begin to swell. The next thing in order will be surface culture. We remarked at the beginning of these arti-

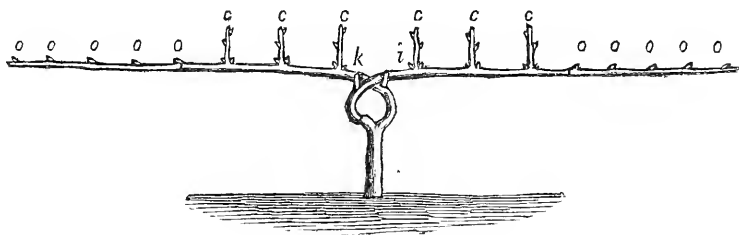
cles, that it would be better for the vines if the ground were given up exclusively to them. We have now arrived at a period when plants can not be grown between the rows without material injury to the vines; the reader, therefore, will act wisely by now giving up his vineyard entirely to the production of grapes. Roots that occupy the soil permanently should not be interfered with by any thing whatever. To return to surface culture. This may be done with a light one-horse plow, or, better, by a horse-hoe, substituting a cultivator tooth for the triangular cutter. We repeat our caution about plowing up the roots. Avoid it by all means. The roots of the vines, if our directions have been faithfully followed, will be found some four to six inches beneath the surface, according to the texture of the soil. The roots will generally be found deepest in light sandy or gravelly soils. Every cultivator should ascertain the depth of the surface roots of his vines, and regulate his plowing accordingly. Some portions of the soil, as along the line of the trellis, will not be reached by the plow; such portions should be broken up by a forked spade. To keep the surface of the soil open and free from weeds, there is no better implement than a small coulter harrow. It must be weighted according to circumstances. It should be used as often as weeds make their appearance, and while they are very small

It will be found advantageous to use this implement, also, after rains, as soon as the soil becomes a little dry. It should be a leading object with the vineyardist to keep the surface well pulverized and open during drought. A deeply prepared soil, well cultivated, seldom or never suffers from drought; never, certainly, to half the extent of poorly prepared soils. In this connection we must give some additional advice, which should have been offered before. There must be no unnecessary tramping back and forth through the vineyard. Never allow the soil of the vineyard to be trod upon, except to perform some necessary labor, or to dispense the hospitalities of the place. Be as careful of it, in this respect, as you would of the carpet on your best parlor.

Having looked after the culture of the

describing. As a general thing, however, there will be the three buds first described, and they must be treated according to directions, which will give two shoots from each spur. From the short spurs, *i* and *k*, there will be a single shoot each. These two shoots should be carried up on the back of the trellis. We have now growing one shoot from each of the buds *o*, two shoots from the long spurs *c*, and one shoot each from the short spurs *i* and *k*. All other growth must be rubbed out.

Let us next see what is to be done in the way of summer pruning. The shoots from the buds *o* are to have their laterals pinched in as heretofore directed for new shoots, and in August the shoots themselves are to be stopped by pinching out the ends, as also heretofore directed. The shoots from the



soil, let us now see what is to be done with the vines. These being secured to the trellis, the next operation will consist in bending down the ends of the arms. To do this, tie the arm to the wire at the first *o*, and bend down the remainder of the arm in the same manner as the first portion was bent down. When the new shoots have grown two or three inches, the arm is to be tied in its place on the lower wire. As soon as the buds begin to swell on the spurs, the middle buds must be rubbed out, and the top and lower ones allowed to grow. If by any accident the top bud should have been destroyed, retain the two lower ones. If both the upper buds should have been lost, there is still the base bud to fall back upon. In the latter case, there will often two buds start from the base, but it is not desirable to keep more than one base bud in the system we are now

long spurs, *c*, are to be stopped just before reaching the third wire, and the laterals pinched in as usual. It will be seen that we do not stop the shoots immediately above the fruit. The practice of short stopping is too often carried to excess even in the grapery. In the vineyard, it is often attended with disastrous results, especially in inexperienced hands. The reason of this will be treated of by itself. It must be understood that the shoots are not to be allowed to grow beyond the third wire, and then pinched back; but they are to be stopped just before reaching the third wire, by pinching off the end, so as to cause as little check as possible to the action of the roots. The laterals will now start with increased vigor, and at each pinching of these an additional leaf must be left. The shoots from the lower buds may be allowed a little additional freedom, but they



must not be allowed to grow so as to interfere with the upper arms. The moderate shading of the upper arms by the leaves will do no harm.

The shoots from the short spurs, *i* and *k*, should be carried up on the back of the trellis, so as to be as much as possible out of the way. The laterals of these shoots may be pinched in, but in other respects they are to be left to grow as they will, without stopping. They are the safety-valves of the vine.

A few words may be added in regard to the quantity of fruit the vines may now bear. One bunch of grapes may be left on each of the shoots proceeding from the buds marked

*o*. The upper buds on the long spurs, *c*, may be allowed to carry two bunches each; but the fruit that shows on the shoots proceeding from the lower buds on these spurs must be removed. The strength of these must be saved for fruit next year. The shoots of the short spurs, *i* and *k*, may be allowed to carry all the fruit they set. The fruit, however, will be better if the bunches are reduced to two on each shoot. We shall thus have twenty-six bunches of grapes from each vine during the fourth summer. More could be taken, but not with benefit to the vine, which will require another season for its full development.

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## HORTICULTURAL GOSSIP.

BY AN OLD CONTRIBUTOR, CLINTON, N. Y.

MR. EDITOR:—Will you allow an old contributor to gossip awhile, in easy gown and slippers, with you and your readers? Under such a license, my words will have more freedom than they would in a formal essay.

What are good manners, in visiting a friend's garden? I have a neighbor who comes to see me several times a year, and whose visits I have hardly grace enough to endure. He has a smattering of horticultural knowledge, and he owns a country place, which he thinks is the very pink of perfection. "Now, I want you to go around and show me your grounds." Well, while I am trying to do so, he struts loftily, and talks about his own establishment, his English gardener, and his fast horses. Am I pointing out a fine specimen of the European or Siberian Silver Fir, he breaks in, "Oh, yes, I've several like them, only bigger; the pedlar of whom I got mine said they called them Balsams down in the swamp." Show him a Delaware or Rebecca grape, and he will admit they are tolerably good, but smaller and less fragrant than the Charter Oak and Northern Muscadine. A Japan Lily is passable, but then he has several other kinds, yellow, red, and white, lots of them! And so he

runs on about *his* arbors, and *his* terraces, and *his* serpentine walks, and *his* statues of Venus and Neptune, and much other gimcrackery with which his pretentious place abounds. When he has sufficiently disparaged my place, and lauded his own, he goes home. I pray you, Mr. Editor, happen this way some time, and bring him down from his high horse.

A friend of mine, who is a fond planter of trees, has also a thorn in his flesh. It is a lady! She looketh not well to the ways of her household, but, neglecting her children, goeth about to talk of cats, dogs, horses, and flowers. Her mind is good, so far as it goes, but its scope is not wide. When she visits my friend, she never notices the rare trees which are his joy and pride, nor the velvet lawn, nor the antique vases, nor the fine outlooks into the surrounding scenery, which he has opened with so much artistic skill. But she begins at once to harrass him with talk about some petty detail, generally of her own experience. Now, she chippers away about sowing flower-seeds; then, how to cure a sick cat, how to strike cuttings, how to poultice a felon, how to save seeds; and she dwells on each point with a minuteness and long repeti-

tion, that—that “beats the Dutch.” And all this sort of talk while walking through one of the finest gardens in all this region of country! She finishes up each visit by begging a few cuttings and a few seeds, and then, with a courtesy and a bewitching smile, bids adieu.

The question now returns, Mr. Editor, which is the proper way to make a horticultural visit? ‘Strikes me, I should not make it an occasion for disparaging my friend’s garden and extolling my own. It is not best to waste his time, and tax his patience, by chattering away about trivial details, or such matters as can just as well be discussed elsewhere. I should leave my garden at home, when I go to visit his. Instead of pulling at his button-hole, and engrossing the time with my sage observations, I should listen to him, in a receptive state of mind, desirous to see and learn, and enjoy all I can. And when my visit is ended, I should thank him for the pleasure he has afforded me.

And, sir, I gladly testify that I *do* receive such visits, now and then. Some persons show at once that they appreciate what they see. Instead of criticising, or making invidious comparisons, they heartily admire, and express their pleasure without stint. Others walk along more quietly, confessing their ignorance of gardening in its higher forms, but begging me to tell them the name of this and that, and the origin of the other; and they receive all that they see and hear with evident satisfaction. It is a great pleasure to receive such guests.

And now that we are on this subject, let me add a few words more on another branch of it. The middle of the day is not a desirable time for visiting gardens; for then the light falls vertically, and the shadows of trees and shrubs are almost imperceptible. If, too, it is mid-summer, the heat of noon is so intense that the visitor puffs and sweats, and feels that he is pursuing enjoyment under difficulties. Half the poetry of a garden is lost by viewing it under a broiling sun. Go, rather, in the morning, when the dew is sparkling on tree and grass, and when the birds are musical. Or go at evening, when

the shadows fall aslant, when the heat has abated, and the cool air is fragrant.

Our gossip must touch upon another matter. Mention was made in one of your former volumes, of the improvements then in progress in the grounds of Hamilton College, located here. Since then, some additions have been made to the list of trees and shrubs. The trees have been arranged chiefly with a view to their landscape effects, though a classification in families has not been wholly lost sight of. Among the Elms, Maples, Lindens, Oaks, Beeches, etc., there are five or six varieties of each species. A Pinetum has been begun, in which a considerable number of the conifers, hardy in this climate, may already be found. Here is a list:

*Pinus strobus*, *P. sylvestris*, *P. Austriaca*, *P. pumilio*, *P. excelsa*, *P. Cembra*, *P. Benthamiana*, *P. ponderosa*.

*Abies excelsa*, *A. nigra*, *A. alba*, *A. Canadensis*, *A. compacta*, *A. Cephalonica*.

*Picea balsamea*, *P. pectinata*, *P. Pichta*.

*Juniperus suecica*, *J. Virginiana*, *J. sinensis*.

*Thuja occidentalis*, *T. Siberica*, *T. Hovei*.

*Taxus Canadensis*, *T. baccata*, *T. elegantissima*.

*Thuja borealis*.

Not a few of these trees were presented to the College by intelligent horticulturists in different parts of the country. Among the donors are such worthy names as Charles Downing, of Newburgh, Henry Winthrop Sargent, of Fishkill Landing; Messrs. Ellwanger and Barry, of Rochester; and Hovey & Co., of Boston. This collection of trees is comparatively small as yet, but, as a beginning, it is highly prized by the College and its friends.

[We are happy to hear from you again. It is evidence not only of better health, but that you have not forgotten us. So may it always be. You may gossip not only *a* while, but *all* the while; a privilege we do not extend to every body. You have hit upon a suggestive theme, and painted it in life-like colors. We are sorry to say that just such ill-bred persons do our country places, but how painfully plain it is that

they were not educated for them; that they are strangely out of place; that neither is fitted for the other, any more than jewels are fitted to adorn animated pork. Oh that these men would learn the wisdom of silence! Few things are more painfully annoying than a visit from a man full of pompous pretension: he will neither enjoy any thing himself, nor let you. No matter how well grown or beautiful your plants may be, he always has something better at home. No word of praise or commendation ever escapes his lips, be it ever so well deserved. He runs his round of stereotyped depreciation, departs, and you feel as if you had been relieved of some hateful nightmare. We can remember with satisfaction more than once having knocked the stilts from under such men, and precipitated them to their proper level. We never fail to do it when we can; for a man has no right, moral or otherwise, to be unamiable at his friend's house. The world is no better for such men, but quite the reverse. We would reason thus with them: when you enter a friend's garden, do try to leave at the gate all egotism and selfishness, and resolve to please and be pleased. Remember with how much care your friend has collected his plants about him, and how much enjoyment he finds in them. Remember that they are all beautiful, some more, some less; this you can not help *feeling*, though you may not acknowledge it. Remember, above all, that they are the handiwork of Infinite Goodness, and speak not contemptuously of them, even to heighten the praises of your own. If you want to hear your own plants praised; ask your friend to come and see them; and if he is barely a sensible man, with a heart alive to the proprieties of life, and a nice appreciation of the beauties of nature, you will hear enough to make a reasonable and modest man content. For how much better it is that another should praise us than that we should praise ourselves!

Having disposed of the man, what shall we do with the woman? We fear we shall have to put on a pair of soft kid gloves.

The treatment in this case must be gentle and soothing. When she begins to talk about cats and dogs, tell her, as she seems to be so very fond of them, you will send her a good litter, which you must forthwith do. Send a fresh litter every time she broaches the subject, and in time she will take the hint, and carefully avoid the mention of cats and dogs in your presence. In like manner treat other inapposite subjects. For instance, when she talks about a poultice for a felon, say to her, "Well, well; but is that poultice good for the Black Knot?" You will be able to manage her in this way. Fortunately, there are only about three such women in the world; and the rest of them are such dear delightful creatures, and love flowers so fondly, flitting about among them like butterflies, sucking sweets from each, that you can well afford to bear with the three that are full of cats, and dogs, and felons, and what not.

You have a just and proper conception of what a horticultural visit ought to be. When we make such visits, we go for the purpose of learning and enjoyment, and to make our friends as happy as may be. Horticultural intercourse often is, and always might be made, a source of the purest enjoyment. There is something in horticulture that tends strongly to develop and expand man's social qualities; the only drawbacks to this are the selfishness and egotism of unregenerate human nature. What a delightful thing it is to receive a visit from one who knows the full value and beauty of your plants, and has the manliness to say so! We see you understand this perfectly. You are altogether right in regard to the best time to visit the garden. It is surprising how few think of this; and yet a whole chapter might be written about it.—We are glad to hear that the improvement of the grounds of Hamilton College is still progressing. The college, we suspect, is very much indebted to you for this. There are no doubt some among our readers who will esteem it a privilege to present some valuable tree to the college. They could not read to themselves a nobler monument.—ED.]

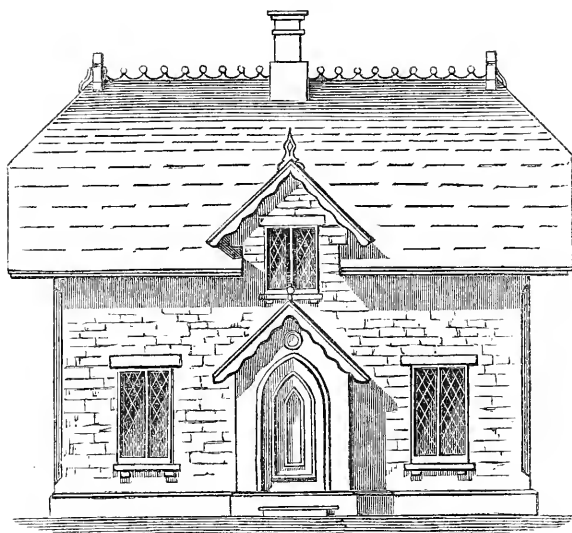


FIG. 1.—Front Elevation.

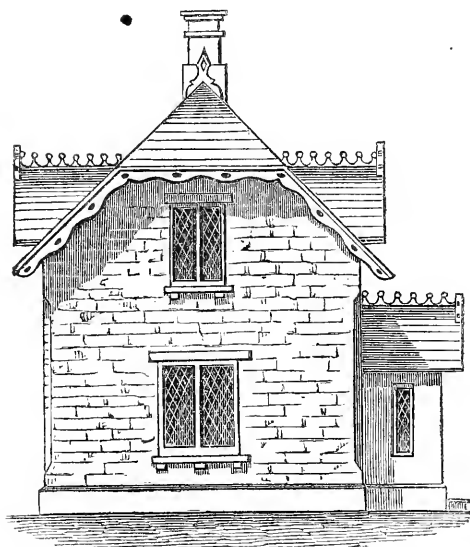


FIG. 2.—End Elevation.

## COUNTRY HOMES.

BY GEO. E. WOODWARD, ARCHITECT, NO. 37 PARK ROW, NEW YORK.

RURAL ARCHITECTURE has always been one of the leading features of the HORTICULTURIST, and from the publication of the first volume, some seventeen years ago, down

The Greek temple and the ill-proportioned box have given place to more convenient forms; the beauty of proportion, ornament, light, shadow, and color, have succeeded

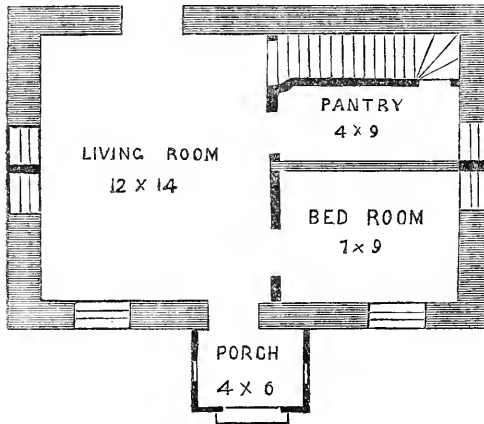


FIG. 3.—First Floor.

to the present time, this subject has scarcely been allowed to remain quiet. In this respect, as well as in all other matters of rural art, no writer has been so thoroughly suc-

cessful in revolutionizing and educating the public taste as the late A. J. Downing. He has laid a foundation broad and deep, the influence of which can not be over-estimated.

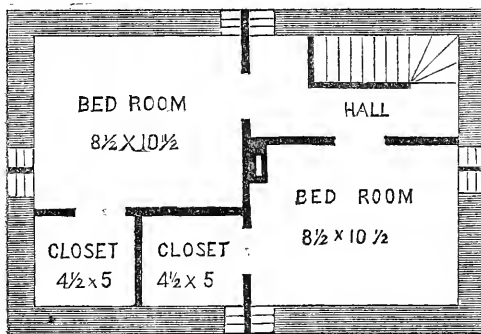


FIG. 4.—Second Floor.

cessful in revolutionizing and educating the public taste as the late A. J. Downing. He has laid a foundation broad and deep, the influence of which can not be over-estimated.

the clumsy outlines and glaring aspect which characterized our country homes. We build to-day, for less money, more attractive and beautiful dwellings, and surround

This month we present the first of a

series of designs which will be continued in future numbers, intended to embrace all the various combinations of arrangement, style, and price, but to be more particularly devoted to plans and elevations hither-

and sell for more money, and that they are better worth owning and living in.

The first design (Figs. 1, 2) is intended for a laborer's cottage about to be erected on the grounds connected with a fine estate on the western slope of the Palisades in New Jersey, is to be built of rough stone, plainly finished,

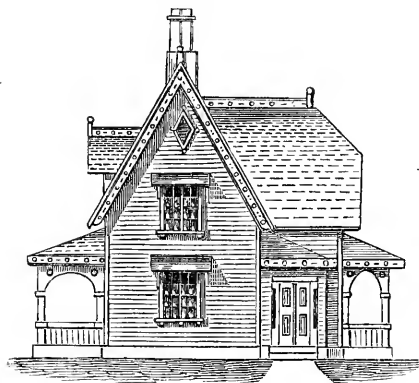


FIG. 5.—Front Elevation.

to almost entirely neglected by most writers on this subject; that is, low-priced houses, together with the different modes of construction. Comfortable, convenient, tasteful country homes, at prices within the

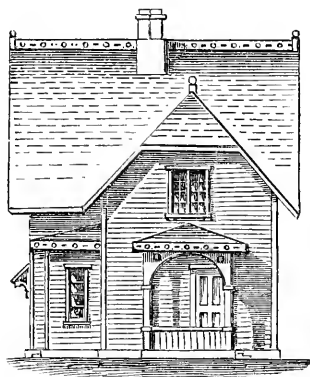


FIG. 6.—Side Elevation.

reach of all, has long been a careful study with us, and we propose to show that it is even more economical to build in good taste than to build in any other manner; that such houses will rent for more money,

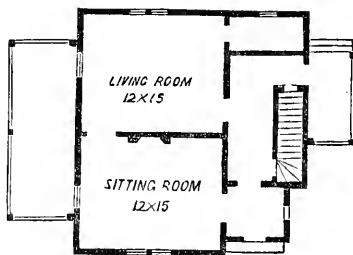


FIG. 7.—First Floor.

and estimated to cost about \$450. It is 16 by 24 feet outside, having a living-room with bed-room on the first floor, (Fig. 3,) a large pantry, stairway, etc., and a fine cellar below. The second floor (Fig. 4) has two bed-rooms, well lighted and ventilated, and large closets to each. This size will admit of several different arrangements; the rear door might open out from the pantry, and afford more convenient access to the cellar stairs, to get in heavy articles, and shut out some cold in

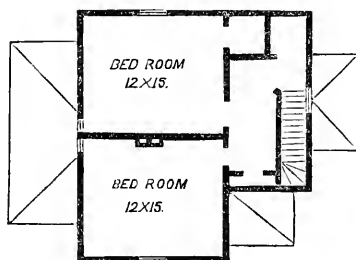


FIG. 8.—Second Floor.

winter, but would interfere with the fine ventilation so necessary in summer to a generally heated apartment, as a kitchen, dining, and living-room combined. A porch might be placed over the rear door, or better still, at a small additional expense, a summer-kitchen and wood-house might be added. A house of this accommodation

is usually the first one put up by settlers on the western prairies. They are built with a balloon frame, which is stronger and forty per cent. cheaper than the mortice and tenon frame; and where lumber and labor are cheap, we have seen them built for \$250. This is for a plain straight ridge roof and without porch. The elevations as shown, give a greater variety, and a house thus constructed may afterwards become a very pretty portion of a larger and more expensive structure.

The second design (Fig. 5) is for a frame building giving more variety of outline. The plan (Fig. 7) separates the sitting room from the kitchen and dining room, and insures more privacy. There is also a greater abundance of closets, though smaller. One of the bed rooms above might be divided into two, and thus increase accommodation. A por-

tion of the cellar may also be finished for a kitchen, and the living room used as a dining room. This plan admits of future additions being made without destroying the harmony or proportion of the building. To one of moderate means, such a mode of building presents some attractions, as it affords a house for immediate wants, to which additions may be made as one's means increase. Such houses, if tastefully furnished and embellished with suitable surroundings, as neat and well-kept grounds, fine trees, shrubbery, flowers, and climbing vines, will always attract more attention and admiration than the uninviting aspect of many more expensive structures. Money tastefully expended in this manner will always yield gratifying results. This last design can be executed for about \$800; and in many localities can be built for less.

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## THE VERBENA DISEASE.

BY PETER HENDERSON, JERSEY CITY, N. J.

MR. EDITOR,—As one of the "committee" whom you have called upon to report on the disease now committing such ravages on the Verbena, I think I can best do so by giving my own routine of culture, which I am happy to say has thus far exempted me almost entirely from the plague; this season entirely so. Understand me, I do not go so far as to say that it is my particular mode of culture that has saved me; there may be something in soil or locality that has more to do with it than in the treatment of the plant. Yet I can not help thinking that my mode of culture has got something to do with it, for the reason that I do not know of a single florist in my neighborhood whose stock is not infected with it more or less, and in most cases completely destroyed; and these, too, numbering scores within the radius of a few miles, having in many cases identically the same soil, and when in some cases the distance is only a few hundred yards; certainly also the same climate.

To begin, then. The plants that we use for stock are struck in spring, the cuttings taken in all cases from the most vigorous plants. When planted out in May, they are usually not more than five or six inches high, containing nothing but young tops and young roots, and as nearly resemble a seedling plant as may be. This point I consider very important, as in too many instances, in the hurry of spring business, florists neglect the laying aside of plants for next year's stock until the hurry is over, when there is nothing left but the refuse. This used to be my own practice, until the appearance of the disease some six years ago, when I considered the necessity imperative to require a more healthy progeny.

Another requirement is, that we never plant out twice successively on the same soil, and, if possible, use fresh ground that has not been recently cultivated.

In October we take off the cuttings preparatory for winter stock, choosing again

only the youngest and softest shoots. These root in the cutting bench—in which there is a slight bottom heat—in eight or ten days; they are then at once potted off, and carefully treated by shading and watering until they are able to bear the sun and air. These are the plants from which we take our stock for spring sales during the winter and early spring months. Sometimes, when we get a large stock of old plants to take cuttings from, we throw them away, the winter and spring struck plants being much finer.

In our winter treatment we are particularly careful to avoid extremes of temperature: average at night, 40°; in daytime, 55°. The plants are set on benches covered with sand or sawdust, from one to two feet from the glass, great care being taken that they never get too dry; and giving abundance of air at all times when the weather will permit. This, then, is our whole mode of proceeding in the culture of the *Verbena*. Very simple it is, but requiring to be steadily adhered to.

And now let me state what I consider may be the predisposing causes that lead to a generation of the disease. In a paper sent to the *Gardener's Monthly* a year or two ago, I gave it as my opinion that the sudden checking of the sap by our early fall frosts was possibly the cause; and although that idea is now somewhat modified by further experience, I still think that the checking of the sap, by the plant being allowed to get too dry, by frost, by the attacks of green fly, or any other cause, may tend to dispose the plant to its attacks. Such we know to be one of the causes, if not the sole cause, of the attacks of the common white mildew. Dearly purchased experience has shown us this in too many instances. I will relate one or two. In a greenhouse filled with Hybrid Perpetual Roses—seventy feet long—the top sashes were let down about two feet in a cold day in March, when the Roses were in full leaf; the leaves were observed to very slightly touched with frost; not enough, apparently, to injure the plants, but in two weeks after,

under every sash that had been let down, the plants were infected with mildew, while not a plant was touched in any other part of the house. The conclusion was inevitable, that the mildew was caused by the stoppage of the sap vessels by the frost. In this case, the cuttings taken from the plants, on being planted out, regained their wonted health the next season. But a similar accident once occurring to a large lot of *Souvenir de la Malmaison*, though it is now more than eight years ago, I have never been able to eradicate the disease from that variety since, proving that some varieties are better able to throw off the disease than others. Another predisposing cause to mildew on Roses, when grown in pots, is in the drying of the mould in the pots. Once let the pots get dry enough, so that the leaves will “flag”—sap get checked—and rest assured that every variety disposed to mildew will show it in a few days after such treatment.

But I have wandered a little from my subject, and given you a dissertation on “white” mildew together with “black rust.” Let the analogous nature of the diseases be my excuse.

In regard to remedies, when plants are affected by either of these diseases, if once sufficiently severe to penetrate the cellular structure of the stem, remedies are as hopeless as if applied to a man in the last stages of consumption. True, the plants may not die, but they are hopeless invalids for that season, if not for more.

I am glad, Mr. Editor, that you have called upon me to report on this matter, as I have understood that there is quite a number of our fraternity who do not hesitate to say that I have some “secret,” some hocus-pocus, by which I have so long kept the plague from my door. If I have any secrets on this matter, they are all revealed in these pages. That I am not apt to withhold information, even when I do possess it, I think you as well as many others, will endorse.

It has given me much pleasure during the whole course of my business career, to give all the information I possessed in relation to horticultural matters, and I know I have



gained by the practice. No one can have a more thorough contempt than I have for the man who would withhold information, thinking that his business would be benefited thereby.

I trust the other members of the "committee," if they have not already, will shortly give us their report, as what I have been able to say is by no means conclusive or satisfactory.

[Up to the present time you are the only one of the "committee" heard from. We hope the others will report in good time. The "black rust" or mildew has become a very serious matter, and it is very important, especially to propagators, that its cause and nature should be understood. Having escaped its ravages, we have had no opportunity of studying it closely; we can only speak of it as we have seen it during visits among propa-

gators. We find, as a general thing, that the older varieties of Verbenas are the last to be attacked, the least robust and light-colored ones being the first. The Verbenas, owing to its usefulness, and consequent popularity, has been crossed and pampered to a high degree; it has hence, in a measure, become constitutionally delicate, and to that extent more liable to the attacks of disease. It becomes very important, therefore, to select propagating stock only from plants that are in the best condition. That the mode of watering the young plants has much to do with the virulence if not the development of the disease, we have not the least doubt. The reader can now form some idea of our theory, which we shall develop fully by and by. In the meantime we wait to hear from other members of that "committee,"—Ed.]

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### THE GRANITE BEAUTY APPLE.

BY THE EDITOR.



WE are indebted to Mr. Z. Breed, of Weare, N. H., for a box of the Granite Beauty apple, with the accompanying illustration. The apple has been described before, but will

probably be new to most of our readers. Mr. Weare informs us, "That years ago, when our grandfathers and grandmothers first came to seek them a home in the wilds of New Hampshire, their only mode of conveyance from place to place was on horseback. The grandmother of the family that lived on the farm I now occupy, was one day returning from a visit to her old home and friends, mounted on a slow horse; a long ride was before her, and wishing to accomplish it in one day, she felt the necessity of using means to increase the speed of her pony. Looking about for something that would suit her purpose, she spied by the way side a slender 'stripling' of an apple tree, which she plucked, *roots and all*, and came on her way rejoicing. Soon after arriving home, it being the season for setting out trees, and the subject of planting an orchard decided upon, she bethought her of

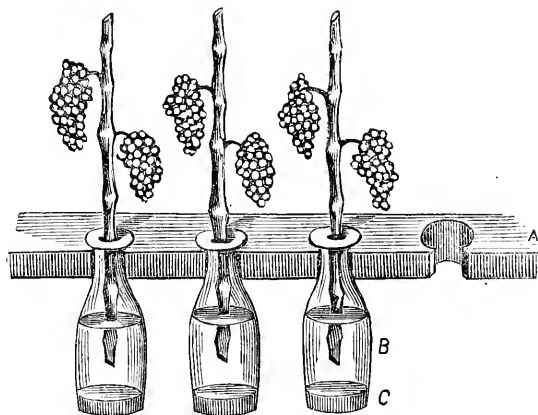
her riding stick; this she took into the little orchard 'to be,' and with it finished a row of trees, just transplanted. It lived, flourished, and from it were taken the scions that produced these apples. The tree is exceedingly hardy, naturally low in 'stature,' flourishes best in a rich gravelly soil, and bears *every year*. They are good for cooking, early, and with good care, keep till into March." He further says, that Mr. Wilder esteems it "an excellent winter fruit, large, handsome, and good," and that Mr. Downing has expressed an opinion of similar purport. The apple is large and handsome, with a very tender flesh and peculiar flavor. We consider it a good apple, but not best. Its size, appearance, and keeping qualities may render it a good market fruit. To judge from a branch of the tree with fruit on it, we should say it was very productive.

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### PRESERVING GRAPES.

WE are indebted to our friend, C. Marié, Esq., for the following translation, describing a somewhat recent French method of preserving grapes. As it resembles some-

Thomery, and son of the celebrated Mr. Charmeux who improved the Thomery mode of training vines, now in general use,) has contrived, within a few years, a new



what a plan that we have tried with great success, we have much faith in it. Besides this, it is reasonable on the face of it.

"Mr. Rose Charmeux, of Thomery, (one of the best growers of Chasselas grapes at

way of preserving grapes, which has succeeded better than any other plan hitherto in use.

"Contrive a place in a properly arranged fruit-house. Fasten against the sides a

series of small racks similar to those in the engraving, and place one above the other at about 12 inches apart. Place in each one of the notches, A, of these racks a small bottle, B, three quarters full of water, to which must be added a small quantity of powdered charcoal, C, to keep the water sweet.

"Gather the grapes at the usual time, selecting the handsomest and most perfect bunches, and those which have been thinned out. Cut those branches which bear two bunches, and place the lower end of the branch in a bottle, as shown in the engraving. These grapes must be examined every week, and the imperfect berries taken off with scissors. Chloride of calcium is to be used to absorb the dampness of the atmosphere.

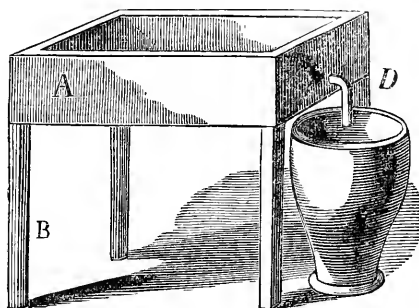
"Mr. Rose Charmeux preserves the largest portion of his Chasselas, and even his Frankenthal (Black Hamburg) grapes until the end of April. This method is so successful that the grapes are as plump and the stems as green as when taken from the vine.

"The following is the plan of Dubrenil for using the chloride of calcium:

"Until now the only means used to get rid of the dampness which arises from the fruit in the Fruiterie, has been to ventilate the fruiterie during ten days before closing up the house. This plan has serious objections. In the first place, it causes the temperature of the room to become the same as that of the open air, which often injures the fruit. It also introduces air less charged with carbonic acid, which is quite as objectionable; besides it is exposed to the light, which hastens its maturity. Besides, this method can only be used in dry weather, and when the temperature is above the freezing point. Now as this is seldom the case in winter time, the fruit is consequently subjected to the dampness of the fruiterie.

"To overcome this difficulty, we recommend to use chloride of calcium, which must not be confounded with chloride of lime (*chaux*.) This comparatively cheap article absorbs nearly double its weight of moisture, and becomes deliquescent after being exposed a short time to the damp air.

"In order to make use of the chloride of calcium, make a wooden box, A, (lined with



lead, as in the engraving,) 20 inches square and 4 inches deep, which must be raised about 16 inches from the floor, on a small stand, B, inclined a little at one side at C; in the middle of the inclined side place a spout, D. This apparatus being placed in the fruiterie, put in it about 3 inches deep of chloride of calcium, very dry and porous. As it melts, the liquid runs out through the spout into a stone jar underneath it. If all the chloride of calcium is melted before all the fruit is taken out, you must renew it. About 40 pounds are sufficient to keep a fruiterie dry, used at three different times.

"The liquid which is obtained by this plan should be carefully kept in stone jars, and tightly covered until the next fruit season. Then, when the fruiterie is again filled, pour the liquid into an iron pot and evaporate it. It is then again fit for use the next year."

## INTERIOR VIEW OF THE "BRIGHT NUT" BORDERS.

BY FOX MEADOW.

A WRITER in sacred history says, "There is nothing new under the sun;" but, Mr.

Editor, if we are to credit the wonderful stories of gardeners in general, they dis-

cover and invent lots of new things every day in the week, and we are convinced, sir, that there is no class of commercial men whose powers of appreciation for the "new" excel that of the gardeners; for on this depends, to a very great extent, the healthfulness of the business they are conducting. We shall now call your readers' attention to a system of "new" vine border making, not "entirely original with us," but with somebody else. We do not propose to argue the question of the possibility of introducing the "new" to attempt a refutation of that "wise man of old;" but, from what we may have to say on the subject, we shall leave your intelligent readers to form their own conclusions. The question was asked in our last article, Are Mr. Bright's "Inside, Divided, Detached Borders," being pulled down as failures in the vicinity of Philadelphia? To this we emphatically say, No! Many persons, however, because Mr. Bright has simply directed *how* these borders should be put up, have called them his! and because the borders in question have failed to swell out the luscious grapes as the old-fashioned borders have done, they blame poor Mr. Bright for it!

We know a gentleman in Philadelphia, who, being struck with the ingenuity of the "new" borders, in which "we have perfect control of the vine's roots," erected one of these, or rather got Mr. Bright to direct the construction of it, but has since torn the whole fabric down; the trouble being this: through the small quantity of soil contained in the divided chambers, it became impossible for the parties growing the vines to keep them damp enough. The house in question was heated by Mr. Bright putting the hot water pipes immediately over the little borders, which dried the poor vine's roots nearly to death. However, Mr. Bright, in his next experiment on *somebody else's vines*, intends to place these hot water pipes *under the border*, as this latter is the mode now adopted in England. We have made a little sketch of the "new" border people call "Bright's," (Fig. 1,) and illustrated it in a

applicable to the lean-to. In this sketch the reader will see how very nicely things are arranged; the border is detached from

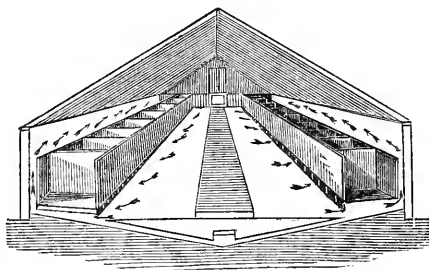


FIG. 1.

the ground of the house, and from the back wall of the house, and each vine has its own soil to devour, and can not encroach on its neighbor, who may not be possessed of such a voracious appetite. These little borders have air conductors running under them, so that the atmosphere of the house is circulated similar to that indicated by the arrows in the cut. The bottom of these borders are concreted and sloped, so that the drainage can run to a main drain placed in the center of the house; but, strange to relate, the gentleman in Philadelphia, who tore down this border, never could get water enough to the roots, to say nothing about running away in a drain!

The reader will now please observe Fig. 2. This is, in reality, a little model of an "Inside, Detached, Divided Border." Every thing "perfect" in this, Mr. Editor. Now we will just explain all about it, and we do hope your readers will note all the "new" features in it. First, then, it is detached from the front wall of the house; it is a "divided" border, and bottom heat is placed in it by circulating hot water. The top of this border has a curb stone hollowed out to hold water, as indicated by the arrows. Here, then, it will be seen, is a very complete system for furnishing the moisture to the vines so much spoken of by our friend Bright; and here is also the mode of arranging bottom heat, so essential for "forcing early grapes, or keeping late ones." Perhaps our readers will discover

where the essential difference is in the construction between figs. 1 and 2, and they may also wish to know if this is "new" as well.

If our memory serves us correctly, we visited Trentham, the Duke of Sutherland's, in the spring of 1844, and there we beheld

houses were built, and among the rest your humble servant had one under his control, and Fig. 3 is an illustration of the house and border as built by Shaw. Perhaps, Mr. Editor, you or your readers will say that this is an "Inside, Detached, Divided Border;" but should you or they

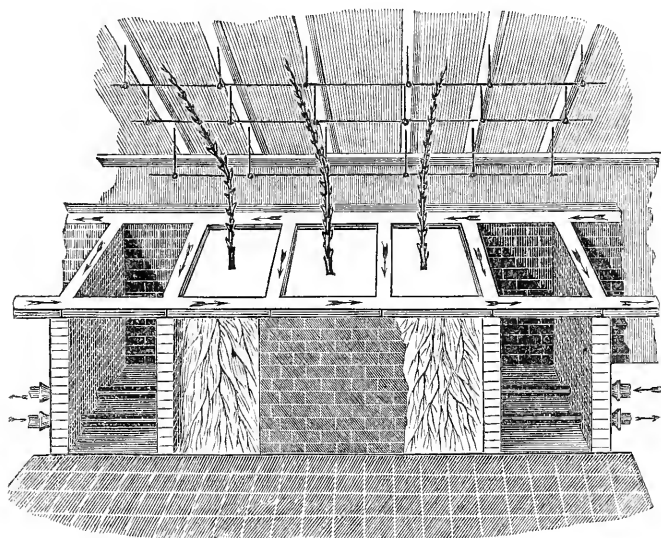


FIG. 2.

this little duck of a vine border! We are not prepared to say this was "entirely original" with Mr. Fleming; perhaps friend Bright would say it was not. This, however, we care nothing about. The border in question, and just as we represent it at Fig. 2, was there, and, for all we know, is there to-day.

In 1845-6, Mr. John Shaw, of Manchester, England, and a Landscape Gardener by profession, introduced to the attention of the horticulturists of Manchester and Liverpool, a very peculiar system of border making. It was claimed by this gentleman, that this border possessed all the real, genuine qualifications for vine growing; such, for instance, as the perfect ripening of the wood, perfect "control of the roots," because having perfect control of moisture; with, perhaps, a hundred other curious sorts of notions not worth talking about. Many of Mr. Shaw's

come to such a conclusion, why, of course, we can not help it. You know our old friend Chorlton, Mr. Editor, very well.

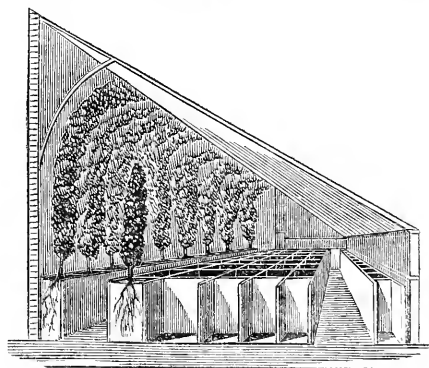


FIG. 3.

Now he is a man brought up in Manchester, if not a Manchester man, and I know the place where he served his apprenticeship

to the gardening business. It was one of those fine old places where the natural and artificial grandeur combined would make a man step gently on the ground; would bring his eyes riveted to a spot, and his heart burn within from some cause we know not! Yes, sir, in this dear old place, some years after friend Chorlton's boyish days were past, we knew this spot of beauty and grandeur, and now we want to tell your readers what we saw there: an "Inside, Divided, Detached Border," sir!! If friend Chorlton still lives—if his old warm heart, full of horticulture, be really not dead, why then, Mr. Editor, he can tell you more about this border than we can, and we do hope, sir, that he will *speake out*; for it is *experience* we and the horticultural world want to hear, and not babblers of theories. Now, readers of the HORTICULTURIST, our experience has been, in relation to all these borders, that they serve a very good purpose for getting rather better grapes than can be produced in pots, and that they are very well adapted for *very early* forcing, when it is intended to grow plants one year, fruit the next, and then throw them away. We have, however, carried the same vines through three fruiting seasons; but all gardeners who have had any experience worth calling experience in forcing early grapes, know that, by forcing very early, the crop becomes ripened in March and April, and that the consequence of this is, a *second* growth of the vine in July and August; and hence the uselessness of vines in three or four years of close early work.

This cause produced the necessity for these borders, purposely to relieve permanently planted vines, and save them from the ruin-

ous effects of being forced so early as to have their fruit ripe in March. In Shaw's houses, they were generally built in compartments, so that crops may succeed one another; but it was never supposed for a moment that any practical gardener would attempt to grow in these big pot borders the same vines for a series of years, and expect to have fruit superior to that grown in large open borders influenced by the action of the sun and external atmosphere! For *very early* forcing, we would make the border entirely inside of the house, from two to three feet deep, when it will be found that the heat of the atmosphere of the house will warm such a border all that is really needed, and the only way that nature has directed us to heat borders. All suspended borders—all borders with a heating apparatus at the bottom of them, are systems opposed to nature calculated to do more harm than good, and will in the end prove destructive to the character of their advocates and the vines as well.

[Mr. Bright's chief mistake consisted in pushing a theory quite too far; but since he has acknowledged his errors, it is just as well that they should be buried with the past. The only really valuable inside border for general use is that indicated by Fox Meadow; namely, a border some three feet deep, *occupying the whole interior of the house*. Such borders we have made and used, and know them to be valuable, especially for early grapes. In skillful hands they work admirably. In regard to Mr. Chorlton, we fear he has "clean gone dead," at least so far as the horticultural world is concerned. He attained to an eminent place in his profession, and was a useful man in his day and generation.—ED.]

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## ORCHARD CULTURE.

BY P. G. BERTOLET, OLEY, BERKS CO., PENN.

IN your December number occur some editorial remarks recommending the raising of crops in orchards, etc., which we can not pass quite unnoticed. It was our im-

pression that this practice had long ago been exploded by good pomologists.

The raising of ANY crop in orchards will and must abstract vegetative nourishment

from the soil; and where this is rich and deep, it needs no enriching by root culture or any cultivation of any crops; and when the soil is shallow, it is equally absurd, because the *root* culture won't pay in poor soil, and the disturbance of the soil and extraction of nourishment in moisture and aliment, is, to say the best, very bad philosophy in fruit culture. It is disturbing the tree's main "base of supplies;" for it is in the top soil you find the small, innumerable rootlets that are, and give life, vigor, and health to the trees; disturb these, or interfere with these in any way by other crops, and you are attempting a thing contrary to our school-boy principles of philosophy, of putting two things in one space. Just as absurd it is to attempt to raise or plant any thing where you plant a fruit-tree. Let that space be that tree's, and nothing else. You must know that the best grape grower will not even allow a strawberry stalk to grow under his vine; and why? because he fears that some of the elements needed by the vine to produce perfect fruit might be carried out of the soil by the strawberry, and thus deprive or rob the vine of some of its necessary and legitimate elements.

Nothing can be done worse than plowing orchards in this vicinity. It is sure to cripple if not kill the trees, just as sure as a "raking fire" of cannon will destroy a body of infantry. Plowing and deep digging about trees interferes with the rootlets. The rays of the sun are just as essential to the rootlets of a fruit tree, as to its foliage. It is by this change of eliminative power that the real improvement of plants is effected. It is here, as in the human system, many diseases are seated in the eliminative organs. Now where cropping is done, this is interfered with.

We must first have the proper elements eliminated before they can be transformed into Bartletts and Newtowns. If this physiological function is imperfectly performed, the fruit will be imperfect, no matter what the grafts may be. We are aware, also, of the important office of solar light in this

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respect. It has just as much to do in perfecting the growth of the apple as the tuber of the potato. The potato, tomato, and egg-plant, are all individuals of the poisonous *Solanacea*. Yet these lose all their poisonous properties under proper cultivation, by the influence of light. If this be so, why should we not expect similar influences on our fruit trees? What is the apple in its natural state? It is improved by improving its eliminative powers. It is upon this principle that the florist secures his double blossoms. It is by this that the *crab apple* is changed into the beautiful Pippin. The influence of light is too much lost sight of by pomologists. In the human system pathologists call the impaired eliminative functions dyspepsia; in the other we would suggest the term of *cripple-tree*, for fruit trees may become dyspeptic as well as other things, from overfeeding as well as from a lack, resulting in marasmus, which becomes so apparent in the sickly and stunted appearance of the trees. It is a cause of premature old age and death in trees as well as man.

Some urge the plowing of orchards while young. It is equally injurious. If you plow you keep the top soil loose and separated from the roots, thus cutting off this part of its base of supplies. Besides, trees thus treated are more likely to be blown over or stand inclining S. E., at an angle of of 45°, all in consequence of plowing. We will say nothing of other local injuries generally inflicted, more or less, by the most careful and expert workmen, in the shape of "barking," rubbing, and skinning the young trees.

Plowing orchards won't pay. If you can't afford to have an orchard without cultivating poor stunted crops and sickening the trees, we would advise you, remove the trees, and you have a clear piece of land, and nothing to interfere with your operations. You ought to be satisfied with the produce of a good orchard. There is a sin of being too greedy. No man likes to do physically double duty? Why, then, ask your acre devoted to fruit to do double

duty? It is preposterous. One or the other will and must be short of perfection.

Root cropping has other bad effects upon the fruit. August is the month in which the apple makes its main growth. This is the dry month. Vegetables extract much moisture, and just so much sap from your Baldwins and Newtown Pippins, these remaining smaller and dryer in consequence. The fruit, during these hot days, is also more apt to drop; the tree casts part of its fruit for want of "drink." And all this is made worse; for when you want to cultivate under the trees you must "trim them up high," so that you can get through under them with horses. Now, when the trunks of apple-trees are high and exposed to the scorching rays of the August sun, it heats the sap, and gives the fruit a sickly appearance, and does never arrive at that perfection as when the tree is left to indulge in at least some of the more natural forms of growth. We never train our trees high. The storm has less effect, the rays of the sun will not lay on its trunk, and the fruit produced is fairer.

We preserve the thrift of our orchard by fertilizing the soil every four years with lime spread on the sward in the fall, and mulching with barn-yard manure in spring. We prefer this on account of the ravages of mice if done in fall.

The foregoing is respectfully yours. If worth any thing, well and good; if not, we are again satisfied.

P.S.—I prefer to inhabit my house alone with mine; I even don't like rats and mice to consume the contents of my larder. A fruit tree, which ministers so much to the comforts of man, should be equally lord of the spot planted on, and not encroached upon in having its larder in the ground consumed by "root crops."

[Very good; but you see, Mr. Bertolet, you have been somewhat hasty in your conclusions. We do not recommend crops to be grown in orchards. We have stated, we do not know how many times, that an orchard should be given up exclusively to

the trees grown in it. We have, however, recommended certain kinds of crops to be grown, and others avoided, by those who *will* grow something besides trees in their orchards. We do this on the principle, that if a man will not let us do him *all* the good we can, we will do him the most that he will let us. We have been about a good deal among men who own orchards, and we have found it very difficult to convince even a few of them that an orchard should be an orchard, and nothing else. Now it is not in us to turn from a man in disgust because he does not think precisely as we do, or fail to be convinced at once by our argument. We keep our object steadily in view, and if he will not march directly up to it, we lead him around by some pleasant but sure by-path. We repeat, that we would give up an orchard wholly to the trees growing in it, even to the exclusion of your sward; we would not have even that rat in our larder. If root crops are robbers, so is your sward in a smaller way; and it keeps out the beneficent sunlight you so justly praise. In regard to young orchards, we always cultivate them, and recommend their cultivation, because we can make better trees in this way than we can in any other that we have tried or seen tried. Both "fact and philosophy," moreover, favor it. Be pleased to understand, however, that cultivating an orchard does not mean growing other crops in it, as many seem to think. When we *cultivate* corn and potatoes we do not grow other crops among them, except it may be sometimes a few pumpkins and squashes, to the detriment, often, of the corn and potatoes. You must not understand us, again, that ground can not be profitably *double cropped* with some things; for there are hundreds of skillful market gardeners who would at once convince us, beyond all gainsaying, that it *can*. But then, still again, there is a marked difference between plants that permanently occupy the soil with their roots and those that perfect themselves in a short season. So you see the subject must be looked at broadly



to comprehend it fully. You will find our views on orchard culture briefly stated elsewhere in this number. We are always pleased to hear from you.—Ed.]

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## THE HORTICULTURIST.

BY WILLIAM BACON, RICHMOND, MASS.

FROM the commencement of this journal we have been a constant reader of it. The whole work up to this time, has a place in our library, and, to speak our own views of the work, it is a library of itself, and one that ought to have a place in every household, where a garden spot is attached, throughout the land. How far its influence has extended in bringing about a new state of things in the improvement of grounds about homesteads, in introducing among the people greater varieties and better fruits, and more beautiful flowers, we know not. But this we do know. It has ever been a reliable work; one that must meet the full approbation of practical men. Let prejudice call it book farming or book gardening, or both. Be it so. It is the record of practical observing men, gathered in from various and remote sections, and from every one of its contributions information enough may be drawn—sound practical knowledge too—to pay for the work.

We take, for instance, the Editorial articles on Grapes, and in doing it, we have no inkling to flatter the editor, (he must not read this.) We have read every one of them with careful attention, and have to some extent practiced on the teachings, and we consider each number of these worth more than the number of the paper containing them, to any one who would grow a vine; they are so understandable and so practical in their character.

Then, there are the remarks on laying out grounds. By-the-by, what changes have taken place and are in progress in the matter of grounds around dwellings. Many can remember the time, when almost every dwelling in rural districts was set a few feet from the highway, and those few feet, if not left open with the public path, were inclosed in a yard just so many feet one way, and with dimensions bounded with the width or length of

the house the other. Even these small patches, which were sure to be occupied as calf-pens or for horse-baiting, were almost considered a waste of land. A very mistaken policy, and as far removed from economy as it is from the comfort of the occupants of the house. This error, it has been an object of the *HORTICULTURIST* to obviate, by giving plans of grounds, and showing how they may be appropriated in good taste, with regard to comfort and convenience, and yet without pecuniary loss. How far the *HORTICULTURIST* has contributed to bring about this pleasant change, can not be known. Its workings may be out of sight. For instance, a subscriber (all should subscribe) to it, gets ideas from its pages, and carries them out on his premises. His neighbor sees the improvement, and not willing to be outdone, sets about a similar improvement. It may be he borrows his neighbor's paper, as he does his ideas, and gets a plan therefrom. And so the work has gone on until our country has really, in many instances, become enriched and beautified.

Another feature that gives specific value to the *HORTICULTURIST* is, the designs of buildings, which have liberally been given in the work from the commencement. These may seem so many useless appendages, or at best but pretty pictures to some. But dwelling houses and churches are to be built as long as the world stands. Men and women will cheerfully pay their money for these objects; but as the world moves on and the public taste becomes refined, it is seen that money alone does not erect buildings to meet the requirements of the age. There must be an investment of mind as well as money. So, then, mind must be cultivated while money is accumulating to effect the object correctly.

The readers of the *HORTICULTURIST* have

these lessons that teach mind repeatedly and beautifully opened before them. In the whole work, we find plans of rural homes adapted to the necessities, circumstances, comfort, and convenience of every class of readers, adapted to all localities. What a beautiful feature in the work! one that is of itself sufficient to commend it to every one.

With most people, the building of a house is a thing that does not occur more than once in a lifetime. This should be so built as to last generations. Of course, the plan, finish, and location should be thoroughly studied, before the first move is made in collecting materials.

We have witnessed a great error in this matter of building without taste the last season. A farmer of our acquaintance, with a beautiful location, and one that is under the eyes of travelers on an extensive thoroughfare, set about to build a house. The house was built, just about 18 by 30 feet, two stories high, with a piazza in front, fully equal to half of the width of the house; on each end are two windows, one directly over the other. The reader can judge of the *look* of that

house. Still, there was money enough expended to have given the same amount of room, and made a tasteful, home-like building. We do not say, but that one is so to the owner, but if so, his taste shows great lack of culture. The house is no ornament to the town or the ground on which it stands. No man who reads the HORTICULTURIST would have built such a house.

We have named a *few* of the advantages of reading the HORTICULTURIST and similar works. There are *many* more that might be introduced, but we must close by commending it to universal patronage.

[We do not like to say more, and we can not say less, than that we thank you most heartily for your generous appreciation of the HORTICULTURIST. Such words of kind cheer lighten our labor wonderfully, and strengthen our determination to make the world better, if we can, if it be by ever so little. We have much cause to be grateful for kind words from scores of friends, not one of which will ever be forgotten.—  
Ed.]

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### HINTS ON PEAR CULTURE.—III.

BY THE EDITOR.

As these pear articles are to be mainly "Hints," we shall endeavor to get over the ground as rapidly as possible, pausing at particular points only with a view to the reader's profit. Before proceeding to the preparation of the soil, something may well be said about shelter. In building a house, shelter from cold winds is one of the first things thought of by a sensible man; but, strangely enough, this same man will plant an orchard or a vineyard without a thought of shelter entering his head. We might not feel at liberty to impeach his character as a sensible man, but we should be very far from calling him a thoughtful one. The error here consists in a want of knowledge of the requirements of the case. Men too generally conclude, that because a tree is not a sensitive being, made up of flesh and

blood, it requires no protection from the winter's blast or the vicissitudes of climate. This is not only an error, but in many cases a fatal one, so far at least as respects the fruitfulness of the tree, if not its life itself. The truth is, a tree is a living thing, of a wonderful and complex structure, and subject to the laws of life. Some kinds of fruit trees, indeed, are so sensitive to shelter, that without it they refuse to yield their best fruits. Like the domestic animals of the farm, they may continue to exist under almost all the vicissitudes of exposure, but they become scraggy, stunted, diseased, and barren of all good results. It may be received as an axiom, therefore, that all fruit-producing plants are benefited by shelter, and it should consequently be given wherever it is possible to do so. We could

fill many pages with illustrations of this point, in connection with the physiological laws which govern it. The simple truth is, that the subject of shelter has received quite too little attention, while it is yearly becoming a matter of greater necessity, not from any increase in the severity of our climate, but because many of the modes of producing and perpetuating fruit-bearing and other plants has a direct tendency to debilitate them constitutionally. Every man, therefore, who makes an orchard or a garden, should provide for it some suitable shelter, if the situation does not already furnish it.

Protection is needed from the prevalent cold winds, which come from the north, northeast, and northwest. These are the points, therefore, where shelter should be placed. It should consist of a hedge or a belt of trees. These may be either deciduous or evergreen, or both; but some hardy evergreen, like the Norway Spruce, Scotch Pine, or Hemlock, makes very much the best screen. Great height is less needed than a compact growth; the trees should therefore be planted close together, a distance of from four to six feet being quite sufficient. The trees may be planted in rows two or three deep, or, if evergreens, in a single row to form a hedge, and treated as such. In the absence of trees, a high, open board fence has been found to answer the purpose very well.

As we propose to treat of the pear in the garden as well as the orchard, we add a few words about shelter for the former. The points to be sheltered are of course the same in both. A fence makes a good shelter for the garden; but a much better one, as well as much more ornamental, is a hedge of *Arbor Vitæ*, Hemlock, or Norway Spruce, kept nicely clipped. The *Arbor Vitæ* may be planted from twelve to eighteen inches apart, and the Hemlock and Norway from two to three feet.

A hedge or belt of timber should not be too near fruit trees; it should be so far off as not to have the roots encroach on the orchard or the trees in the garden. A

closely planted hedge in the garden should be not less than ten feet from the trees, while that in the orchard may be twenty or more, unless the orchard is devoted exclusively to Dwarf Pears, in which case it may be nearer. The reason for the difference in the two cases consists in the fact, that in the orchard a larger area is to be protected, and the trees must therefore be planted wider apart and trained higher; the roots will consequently spread further and need more room. In addition to this, there is a kind of "instinct" in the roots of trees which leads them to run quickly from a poor to a good soil; and this they will do over a very considerable distance without making scarcely a fibre till the good soil is reached, when they ramify rapidly. The inference from this is, that the soil where the hedge or belt is made should be as well prepared as that of the orchard itself. The extent and form of the hedge must, in a measure, be governed by local circumstances. It will, of course, be understood that where a natural wood is sufficiently near to afford the needed shelter, no other is needed. A piece of woodland two or three hundred feet off will often answer the purpose perfectly. Each one must judge of this for himself, bearing in mind the importance of the object to be accomplished.

Where an orchard or a garden is suitably sheltered, it is much less liable to feel the sudden changes so common in the spring and fall; indeed, it is almost free from them. Turning away the cold northerly winds preserves a more equable temperature, not only in the soil, but in the atmosphere immediately surrounding it and the trees; these consequently enjoy a great degree of immunity from diseases and other casualties, many of which may be traced directly to want of shelter. Shelter, indeed, inasmuch as it checks the radiation of heat from the earth's surface, does to this extent prolong the season; a matter of much importance. It is also a great security against early and late frosts. Shelter is the great desideratum in fruit culture at the West, unless we

are much mistaken. The many advantages of shelter will appear from time to time during the progress of these "Hints," and need not be dwelt upon further at present. We may add, however, that an orchard should not be surrounded with trees to such an extent as to interfere with the circulation of the air. A still, stagnant atmosphere is prejudicial to the health of the trees. The good sense of most readers will prevent them from running into this extreme.

In regard to aspect, one facing the southeast we consider the best. The other points of the compass, in the order of desirableness, are as follows: south, east, southwest, west. Northern exposures are

the least desirable of all. There are localities, however, where northeastern and northwestern exposures may be selected. In such a wide range of country as ours, we can only speak of aspect and exposure in general terms. Thus, we may select a good aspect any where from southeast to southwest, though our own experience and observation point decidedly to southeast. There are sometimes local circumstances, however, which would make a western exposure preferable to an eastern one. It is a subject which must be decided on the spot, and according to circumstances, always, however, with a preference for a southeastern exposure, where it can be had as well as not.

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### LEAF-MOULD, MUCK, AND CHARCOAL IN VINE BORDERS.

BY WM. BRIGHT, PHILADELPHIA.

THE only question of interest to the public, in our recent discussion with "Fox Meadow," on the subject of Leaf-Mould, Muck, and Charcoal in Vine Borders, is this: Is there danger in the use of such materials?

Fox Meadow dodges the issue, by denying that he recommended leaf-mould for vine borders. "Where," he asks, "have we recommended the use of large quantities of leaf-mould?"

We answer, in the HORTICULTURIST for October last, page 455, where, after speaking favorably of charcoal as a useful form of carbon in the border, he adds:

"Any carbonaceous matter, then, placed with the sand in question, will answer the same purpose as pure charcoal. \* \* \* \* There are several kinds of material which will answer this purpose—the common soil—*Leaf-Mould*—but *perhaps* the best of all is muck."

Again, in the November number of the HORTICULTURIST, page 510, Fox Meadow says:

"I have now given the reader the materials of which we compose *our* vine borders. Some may wish to grow grapes who have not

the muck spoken of, and in such case substitute *Leaf-Mould*; and if the latter can not be had, get the wanting proportion in the form of moderately fine charcoal."

If this is not an explicit recommendation of Leaf-Mould as a suitable material for the grape border, then we are unable to read or comprehend the English language.

But we have something further. We think we can show that, in the light of recent scientific investigations and experience, muck and charcoal are also dangerous ingredients of a vine border—quite as dangerous as leaf-mould.

The word "Muck," as originally applied, meant simply *dung*. Webster defines it thus: "*Muck*—Dung in a moist state, or a mass of decaying or putrefied vegetable matter." As employed in this discussion, it is intended to represent the peaty soil found in swamps, composed of the remains of decayed and decaying vegetation, leaves, sticks, grasses, rushes, etc., a sort of *wet leaf-mould* combined with earthy matter.

"Muck," says Fox Meadow, "when lying in immense quantities in swamps, is decomposed vegetable matter with the partial *exclu-*

sion of air." Let us see what the agricultural chemists say about such muck as this.

Dr. Thomas Anderson, Professor of Chemistry in the University of Glasgow, in his admirable work, the *Elements of Agricultural Chemistry*, published by Messrs. Black, Edinburgh, 1860, (an authority scarcely inferior to Voelcker, Lawes, Gilbert, or Leibig,) at page 135, says: "The decay of vegetable matter, *without access of air*, is attended by the reduction of peroxide of iron to the state of protoxide, and not unfrequently by the production of *sulphuret of iron compounds*, which are *extremely prejudicial to vegetation*." This poisonous sulphuret of iron is very abundant in some muck, and is but slightly affected by exposure to the air for one winter, as directed by Fox Meadow, especially if the muck be wet.

D. J. Browne, in his "American Muck Book," published by C. M. Saxton, New York, thus describes the component parts of swamp muck, page 208: "Dead leaves, rotten trunks, and the branches and seeds of trees, enter into the composition of a peat swamp. Trees of considerable size have frequently been found in the bottom of peat mosses. The sulphates of iron and alumina are also not unfrequently present in excess, and exert a baneful influence on plants."

We quote again Browne's Muck Book, page 209. "The acidity of muck," he says, "is often so great, that stones taken from boggy land have every trace of matter that acid can attack, dissolved; in a piece of *granite*, for instance, the mica and feldspar have disappeared, and there will only be left a *silicious skeleton* of a stone!"

So, then, in muck we find dead leaves, rotten wood, strong acids, and poisonous sulphate of iron; materials quite as favorable to the growth of fungi as leaf-mould, and more injurious to vegetation, (unless chemically changed,) in consequence of the powerful acids and injurious salts of iron which it contains.

Now for the *Charcoal*. Some persons think that charred leaf-mould or charred wood will not produce fungi. In opposition to this opinion, we have the following strik-

ing facts, in a leading article in the *London Gardener's Chronicle*, under the editorial direction of Professor Lindley, the most distinguished vegetable physiologist of the age, of a date as late as the 10th of January, 1863:

"Not only is it notorious that ground where charcoal has been prepared, or where sticks have been burnt, is constantly productive of Fungi, as different species of *Agaricus* and *Peziza*, or the far-famed Morell, but charred wood, both in temperate and tropical regions, is peculiarly subject to the growth of *Polypori* and other wood-borne Fungi. This is a fact well known to every one who has paid attention to exotic species. The most common of all, the beautiful vermilion colored *Polyporus sanguineus*, very frequently grows on charred trees, and the same may be said of many other species. But we are not without examples in our own country. Old Oaks, dating at least from the time of King John, which have never shown a trace of a Fungus, except such species as affect the bark and not the wood, if accidentally burnt, produce on the charred surface an abundant crop of the very Fungi which occur in such profusion in our dockyards on badly seasoned timber."

If the scientific positions presented above are sound and correct, it is no conclusive argument against them to say, in reply, that vines have been grown in borders containing muck, leaf-mould, and charcoal, or either of them, without apparent injury. The truth is, the art of making vine borders has puzzled and confounded the wisest heads. We have seen vines fail and go to ruin in pure, simple loam and sand, open and porous; and we have seen them thrive luxuriantly in a border as hard as the bed of a turnpike, full of earth-worms, and "chuckelly" (as gardeners say) as a piece of clay dug in wet weather, and sun-dried into boulders. We have seen exactly opposite results in the case of two vines, standing side by side in the same border, and treated in every respect precisely alike: one vine making a fine, strong, healthy growth, and the other, after it had been vigorous and healthy for years,

going to decay most mysteriously without any evident cause. We shall probably never know all the causes and conditions which produce these diverse results; but we must act, as best we can, with all the light that science and experience can afford us; and if we feel convinced that any substances like leaf-mould, muck, or charcoal, in the border, will breed fungi, or poison the roots of the vines, it is the part of wisdom to avoid them.

We have recently taken out of a large vinery, belonging to a gentleman in this city, a border composed of sand, loam, leaf-mould, and charcoal, the soil being in apparently the best possible condition, and yet the roots of nearly all the vines (only three years planted) were rotten and cankered past all hope. What was the precise cause of this condition of the roots, we are unable to say; but we have for some time been very suspicious of leaf-mould and other carbonaceous matters, and nearly two years ago resolved to avoid the use of such materials in our grape borders, and published the fact in our work on grape-culture in the spring of 1861.

The sarcasms and innuendoes in which Fox Meadow indulges in relation to the supposed errors and inconsistencies in our *former* writings, we pass by "as the idle wind." We did not enter upon the discussion of the qualities of leaf-mould with the intention of quarreling with him; nor shall

we suffer our equanimity to be disturbed by any thing he may say intended to be personally offensive. As to our errors in grape culture, we have honestly and fully stated them in another journal. (See "the Confession of William Bright, grape-grower, who humbly acknowledgeth his errors," in the *Gardener's Monthly* for January, 1863.) Fox Meadow has also, we think, fallen into an error in border-making, and all we desire is, to see him "own up," in a candid and manly way, (*i. e.*, honestly "imbibe the worm-wood,") and place himself *along with us*—with a meek and contrite spirit, and a fraternal feeling for his fallible friend—on that inelegant but useful piece of architecture, the public penitential stool; but if, through hardness of heart, or other causes, he refuse to be just to himself and the public, he should at least be magnanimous, and not, with unsavory missiles, pelt the poor Pilgrim now in the pillory.

[We leave this controversy in the hands of Fox Meadow and Mr. Bright. The reader must be pretty familiar with our own views on the use of muck, charcoal, etc. We make no comment, because in this instance we prefer to leave each party to his own knowledge and ingenuity, which we think will result in the development of a greater number of facts. The importance of the subject can not well be overrated.—ED.]

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## ORCHARD CULTURE.

BY THE EDITOR.

WE promised in our last issue to give a summary of our views in regard to orchard culture. We do this in order that our readers may understand distinctly our convictions on this subject, and to prevent, if possible, any further misapprehension on the part of some of our cotemporaries. We wish to state, also, that these convictions are the result of personal experience, and are not based on any traditions what-

ever, and will always be as boldly avowed and defended as we deem consistent with modesty. We leave others to express their convictions in their own way. Fortunately or unfortunately, we do not belong to that class of men who delight in loud words; but our convictions are none the less strong and decided "for a' that."

But to our "articles of faith" in orchard culture.

1. We believe in selecting a good site.
2. We believe in a most thorough preparation of the soil.
3. We believe in enriching the soil according to its wants.
4. We believe it is better to have the soil too rich than too poor.
5. We believe in muck, as applied to the orchard.
6. We believe in leaf-mould, as applied to the orchard.
7. We believe in carbonaceous matter generally, as applied to the orchard.
8. We believe in shelter for orchards.
9. We believe in planting none but good trees.
10. We believe in planting trees not more than two or three years old, if bought at the nursery.
11. We believe in "setting" said trees after the most careful and approved manner.
12. We believe in pruning and training said trees.
13. We believe in setting the branches low down on the trunks.
14. We believe in keeping those branches and trunks free from moss, caterpillars, and all other pests.
15. We believe in cultivating orchards.
16. We believe it to be a great fallacy to suppose that cultivating an orchard means to grow crops in it.
17. We believe the perfection of orchard culture consists in giving up the soil exclusively to the trees.
18. We therefore believe in excluding all grass, corn, grain, roots, weeds, cattle, mice, borers, and every "unclean thing."
19. We believe that orchard trees may sometimes be profitably root pruned.
20. We believe that this should not be done "promiscuously" with the plow.
21. We believe that orchards may be cultivated without injuring the roots of the trees.
22. We believe that orchard trees may be planted in too rich a soil, and make too rank a growth, thereby becoming unfruitful, and also liable to "winter-killing," and other ills.
23. We believe in checking this redundancy of growth.
24. We believe this may be done in various ways, such as summer pruning, root pruning, laying down to grass, growing crops, etc.
25. We believe that summer pruning and root pruning are the most direct, certain, and satisfactory modes of accomplishing the end proposed.
26. We believe that no manure should be used with crops when the object is to check growth.
27. We believe that manure should be used in all other cases when crops are grown in orchards.
28. We believe that grass robs the trees of nourishment very little if any less than some root crops.
29. We believe that an orchard in grass suffers much more in time of drought than one well cultivated.
30. We believe that orchards laid down to grass, and kept so, should be top dressed from time to time.
31. We believe that orchards should be top dressed whether laid down to grass or not.
32. We believe that lime, ashes, ground raw bones, composts of muck, etc., are capital top dressings.
33. We believe that orchards laid down to grass should be plowed up at the first signs of "giving out."
34. We believe that old and decaying orchards in grass may often be renovated and made good by manure and cultivation.
35. We believe that we have renovated more than "several" such.
36. We believe that a cultivated orchard yields fairer and better fruit than one not cultivated.
37. We believe that a cultivated orchard is more profitable than one not cultivated.
38. We believe it is a great mistake to except fruit trees from the universally recognized laws of cultivation.
39. We believe that these "articles of belief" are full of sound doctrine.

Having reached the full standard of

"Thirty-nine Articles," we think we may rest for the present. Like a good and faithful pomologist, we shall defend *our* "Thirty-nine Articles" against all gainsayers.

## ROGERS'S HYBRID GRAPES.

BY VINITOR, BOSTON, MASS.

IN the January number of the *HORTICULTURIST* for 1862 was an engraving, with some account of Rogers's Hybrid, No. 15, in Mr. Farrington's garden at Salem. This year our visits there were renewed, and our opinion of its value fully confirmed. The judgment of the *HORTICULTURIST*, and *Gardener's Monthly* for November, on specimens sent by Mr. Rogers, accord somewhat with our own, except as to toughness of pulp; no grape in this, or Mr. Rogers's garden, was free therefrom, not even the pure Delaware, Crevcling, Rebecca, Diana, or Concord; (last season, neither had any, to speak of;) the flavor, as in all other fruits, was very inferior; notwithstanding, that of No. 15, to our taste, was highest here. Had you compared fine ripened bunches of those choice varieties shown us by Mr. R., grown only so few degrees south as Connecticut, doubtless you would have been surprised at the difference locality or season makes in the products of the vine.

In both gardens, No. 15 appeared remarkably free from mildew; in Mr. H.'s, there was rot in a few berries, here and there on a few bunches; comparatively none with a large Concord, a few feet in front; while in Mr. R.'s garden it was about the same. In concluding on this number, at the Agricultural exhibition of Essex county, at Rowley, this fall, Mr. H. received the premium for this fruit, over all the above kinds; three years ago, there, it was reported to be of higher vinous flavor than the "Old Catawba." And at the National Pomological Convention, at Boston, opinions were expressed of its fine indications for wine purposes.

It may not be uninteresting to those trying these hybrids, to describe five other kinds more tested by Mr. R., and elsewhere, viz.: 4, 19, 33, 3, and 1. But we would premise a few remarks. Having seen in some magazine, that as these only were exhibited, they

were probably the only ones fit for cultivation; and also another vague idea thrown out, that they were running back to their foreign parents; on inquiry, it was ascertained, that before fruiting, Mr. R. was obliged to transplant from his crowded row of 45, some 25 into another, retarding their fruit two years, all of which ready for trial, two seasons after, was stolen. The following winter killed almost every vine, including native, to the ground; all again bore last season, many deemed equally good as the other six; and when sufficiently tested, will be duly noticed.

It is well to observe, that this experiment was undertaken with no money-making views; but merely as a matter of scientific study and amusement, in an old family garden, (too long cultivated to produce any thing showy,) without the accessories of nurserymen's hot-houses or labor. Mr. R. has only been enabled to carry it on by generously publishing the minutiae of the operation in the liberal pages of the *HORTICULTURIST*; and scattering, thus early, his young plants and cuttings over the country. And the whole thing, for a long time, must have been smothered, or turned to selfish purposes, unless for this, and the encouragement of Colonel Wilder, with a few others appreciating the results to flow from this sole precursor of numberless experiments. Whether or not any thing here is valuable, as a consequence, in a few years, our vineyards, in quality and variety, will rival the European.

To resume a description of the other sorts: No. 4, perhaps, may be considered the success of this experiment, having been well tested in Mr. R.'s garden, three or four years past, on a dozen young vines. It seems neither so vigorous nor as great a grower as 15, 19, or 33, but like a thrifty Isabella; of more foreign foliage, and darker wood, than 15. Mr. Garber, of Pennsylvania, however, states,



out of fifteen of these different kinds grafted in May, that, before the end of the summer, No. 4 on eight canes had made 96 feet of wood, outstripping the rest, ranging from four feet upwards to this amount. The fruit on all these vines presents a uniformity of profuse bearing, of heavy, compact bunches, here and there with heavy shoulders, like a crop of Black Hamburgs under glass. Ripe, here, with the Concord; flavor rich, vinous, sweet, without aroma; skin thinner than 15; no pulp when ripe; keeps well. Its imperfection, here, is liability to be overtaken by early closing seasons, like the Concord and others, leaving partially unripe clusters. Free from mildew of berry and foliage, it drops no berries from rot, or other cause, (unlike the Catawba, Concord, Diana, etc.,) claiming the same as the little Delaware, this chief merit for vineyard culture. Many of these hybrids were fruited last year by Mr. Campbell, of Delaware, Ohio; and, though not considering No. 4 so high flavored as 15, 33, or 19, he pronounces it the grape of the lot, owing to its great size, good quality, profuse bearing, and particularly this exemption from oidium of leaf or berry; growing it mainly for the wood, nevertheless, he says it was large, and much resembled Black Hamburgs. The Cincinnati Horticultural Society report it, "the best black seedling" which has come before them. Without knowledge of this, Dr. Parker, of Ithaca, N. Y., scientifically acquainted with the vine, requesting some specimens for trial, with four other gentlemen of New York, largely interested in grape culture, decided four out of five better than the Isabella, in pulp, skin, and every particular; among them, No. 4, not, in his opinion, of so high flavor as 15, and some others, he judged to be the "great market grape," 200 miles south and west of Massachusetts. Coinciding, generally, with this, another gentleman of eminent science, speaks of it as deserving the appellation of the American Black Hamburg. Concluding on No. 4, reference may be made to the engraving of a common sized bunch, in the last May number of the *HORTICULTURIST*.

No. 19, very hardy, a great grower, and good bearer; foliage and wood more native,

and longer jointed than 4; color of wood and fruit, about the same; quite free from mildew. Fruit, bunch medium, size of berries large as No. 4, both rounder shaped; flavor higher, and more vinous; skin thicker than 4, slightly tinged red inside; no pulp, when ripe; earlier than 15 or 4; keeps well in winter. Has ripened its whole crop here, on many vines, every season; the most certain of the six; reported by the Essex County Agricultural Society, three years ago, "superior to the Concord." It drops no berries from rot, (or in gathering, as none do, of all these hybrids,) or any other cause. In unfavorable places, a slight rust sometimes attacks the skin.

No. 33, a great grower and bearer, of equal vigor with 15, wood equally stout, but darker; short-jointed, and full-budded; foliage as luxuriant, and more foreign. Fruit larger than 4 or 15 in berry, though not in bunch; skin thicker, tinged red inside. Quality very fine, rich, sugary, vinous, sweet, with little aroma, of great nutriment; promises a fine port-wine grape. This, by Mr. R., and Mr. C., of Ohio, (who has fruited it,) and others, is deemed of better quality than 4 or 19. Last year, bunch perfect; this, badly affected here by rot. Ripe very early, about same time as 19.

No. 3, a great bearer, more delicate than either in wood and foliage, a rapid grower, resembling the Diana generally, and in color of fruit, with a large, close-set bunch and berry; ripe a week earlier than 15. Flavor rich and pleasant, with more native aroma than the other five; flesh soft, sweet, and "buttery;" a favorite every where. Free from rot or mildew of berry; foliage tender, sometimes, here, in bad seasons; leaves hanging unripe bunches; exhibits, however, a wide difference, some vines being perfect.

No. 1, altogether "*sui generis*" in appearance and character; wood stout and vigorous, of a whitish hue, and full bud, and short-jointed; foliage peculiar, neither native nor foreign; somewhat of the Rebecca look, though stronger. Fruit, bunch medium, berries oval, large in size, and beautiful as Muscats or Malagas; color nearly white, some seasons; again, almost red or amber. Flavor

pleasant, rich, and highly aromatic; very soft and tender; skin thin; keeps well. This was highly spoken of by the Convention of Grape Growers, two years ago; ripens a little earlier than Isabella. Exempt, here, from rot or mildew; a slight rust sometimes attacks the berries. The color was erroneously stated in one of last year's HORTICULTURISTS.

An impartial notice has been given of these six varieties. Mr. Rogers has, perhaps, a dozen or more equally worthy; and among his new kinds, not yet sent out, some superior to any of the original 45, for parts of our vast grape domain.

The Delaware, though small, is in great estimation; shows, this year, here, a little mildew. The Creveling, when better known, will supersede many others, and should be in every one's collection. Nothing else, very nice, among many new kinds, except the Cassidy, from Mr. Miller, of Pennsylvania.

First time fruiting, rather small; berry and foliage rusty.

[We have heretofore expressed no little interest in Mr. Rogers's experiments in hybridizing the grape. From whatever point of view regarded, they deserve public encouragement. Chance seedlings have thus far furnished us nearly all our best grapes, and it yet remains to be seen what greater degree of excellence can be produced by well-directed systematic efforts at crossing. Mr. Rogers, therefore, and all others like him who have the time and inclination, should receive every possible encouragement to persevere in such efforts. If no great degree of good is to result from them, the sooner we know that the better. If, on the contrary, any decided improvement is to result, the sooner we know that also, the better. Much time must necessarily be consumed in all such experiments and they can not be begun too soon.—ED.]

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### LAWTON OR NEW ROCHELLE BLACKBERRY IN OHIO.

BY A. G. HANFORD, COLUMBUS, OHIO.

THE following will serve to show what this fine fruit is doing here in Ohio, and is an example of good culture which will insure success in most other localities.

Mr. H. Brown, of Norwalk, Ohio, has 100 hills of Lawton Blackberries, occupying 10 square rods, from which he gathered the present season (the third year from planting) 20 bushels of berries, besides those eaten from the bushes by the family and visitors, and the many which remained ungathered. Crop last year about half as much.

The soil is a stiff brick clay, prepared by thorough underdraining and trenching 20 inches deep, and made rich by the addition of manure in the process of trenching. After

planting, a heavy mulching of coarse strawy manure was applied.

Second year the stalks were thinned to two to four in a hill, and main shoots shortened to six feet; side branches from six to fifteen inches, according to strength of growth. Stakes seven feet long are driven firmly into the ground, to which the canes are tied with tarred cord, (marline.) The weeds are kept down, but no other culture given after July.

[We should say that Blackberry plantation was done *Brown*. We think keeping the weeds down after July pretty good culture. Very few Blackberries get half as much as that at any time.—ED.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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CROWDED AGAIN.—We are again compelled to omit much interesting matter. This may be a disappointment to those who sent it, but it is rather a gratification to us, for an editor is always happy when he knows he has something good to fall back on. Our correspondents have done handsomely. Let them continue in well doing, and we shall have matter enough to make up an extra number for our readers. Let them say whether it shall be done.

THE DELAWARE GRAPE FRONTISPIECE.—The frontispiece of our April number, according to promise, will be a *colored* engraving of the Delaware grape, which is now being executed in the best manner from an original drawing by Mr. Tice, of Newburgh. The bunch was grown in the vineyard of Mr. Mace, of the same place. It will be by far the finest colored illustration of a grape ever published in this country. It will be furnished to *all* subscribers of the present year. Non-subscribers will be furnished at 35 cents per copy, if orders are sent in early.

than to be constantly turning back to compare the illustration with the text. We propose to adopt this arrangement when the subject seems to demand it, as we think we can thus render the magazine much more instructive and valuable.

BUCHANAN'S PETUNIAS.—We are indebted to Mr. Isaac Buchanan, of New York, for a lithographic plate of some of his seedling Petunias. It is one of the very best things that we have seen. We saw these Petunias last fall. They are beautifully striped, blotched, and margined, and are by far the most showy Petunias that have come under our observation. They have substance, withal, which is not generally the case with fancy varieties. They are splendid show flowers when bedded. The seeds saved from these plants have, we believe, been placed in the hands of the Messrs. Thorburn. The plants themselves will be sent out by Mr. Buchanan. We are thinking how much we should like to have a bed of them.

OUR ILLUSTRATIONS.—The reader will not fail to observe that we present an unusual display of illustrations this month, exceeding, in this respect, any former number. Our largely increased circulation this year warrants us in increasing our expenditures, and we feel disposed to do so in the most liberal manner. We omit the frontispiece this month, in order to bring the illustrations and the text together, which enables us to multiply their number. The reader will find this arrangement much more convenient

DEATH OF NICHOLAS LONGWORTH.—Still another distinguished horticulturist has passed from among us since our last issue. Reid, Brincklé, Thorburn, and Longworth have quickly followed each other. Mr. Longworth had attained to the ripe age of 81 years. The particulars of his death we have not learned, though we presume he never recovered from the effects of his fall last summer. He was born in Newark, N. J., and went to Cincinnati, Ohio, while still a young man, and accumulated during his life-time an immense

fortune. He was a liberal patron of horticulture, and took an active part in the proceedings of the Cincinnati Horticultural Society. He did more to encourage grape culture than any other man of his day, and he was the first to make for market a good American wine. His vineyards, including those of his tenants, were of vast extent. When the history of grape-culture in the United States shall be written, the labors of Nicholas Longworth will form an important part of it. His interest in Strawberries was scarcely less than that he felt in grapes. The part he took in originating the long controversy on the sexual character of the Strawberry will not soon be forgotten. Longworth's Prolific, McAvoy's Superior, and other well-known kinds, were raised on his estates. It is not possible to give even an outline of his labors in a brief notice like this. While Mr. Longworth's great wealth gave him a commanding influence, he was much respected in social life for his personal worth and unobtrusive character. We had known him for many years; and the last article, we think, he wrote for the press was for the *HORTICULTURIST* under an assumed name. In his death Horticulture has lost a liberal patron indeed.

**DEATH OF GRANT THORBURN.**—We are called upon to record the decease of this pioneer horticulturist. He died in New Haven, Conn., at the advanced age of eighty-one. Mr. Thorburn was the father of the plant and seed business in the United States. Beginning with the sale of a single Geranium, he built up the largest business in the country, which is still continued by his grandsons. We remember very well, when quite a boy, going to his store in Liberty Street, to buy our first Hyacinths; and we remember, too, that before we left, his son George (a man of a noble heart) gave us more bulbs than we had bought, and our boyish hearts was made exceeding glad. Mr. Thorburn's life was full of incidents. These we may weave into a more extended notice. He was most deeply imbued with a love of flowers, and of Him who made them. We have often witnessed his delight over a stand

of flowers, which seemed to us pure and simple as a child's. His character was somewhat eccentric, yet he was earnest, benevolent, upright, with enlarged views of life and its duties. His death was sudden, but he was not unprepared for it, and met his end full of a Christian's hope.

#### BOOKS, CATALOGUES, ETC., RECEIVED.

*Lewis Ellsworth & Co.*, Naperville, Ill.—Du Page County Nurseries. Wholesale Catalogue for Spring of 1863.

*Hubbard & Davis*, Fort Street, Detroit, Michigan.—Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants.

*George Baker*, Toledo, Ohio.—Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, &c.

*J. M. Thorburn & Co.*, 15 John Street, New York.—Descriptive Catalogue of Vegetable and Agricultural Seeds, &c., embracing every standard and improved variety; also, selected novelties.

*Edgar Sanders*, P. O. box 4,183, Chicago, Ill.—Sixth Annual Catalogue of Plants, &c., cultivated and for sale at the Lake View Flower Gardens.

*A. R. Whitney*, Franklin Grove, Lee County, Ill.—Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants, cultivated and for sale at the Franklin Grove Garden and Nursery.

*Peter Henderson*, Jersey City, N. J.—Spring Catalogue of New Plants, Dahlias, Verbenas, Petunias, Fuchsias, Roses, Chrysanthemums, Phloxes, Geraniums, &c.

*American Pomological Society*.—Catalogue of Fruits for cultivation in the United States and Canadas.

*Alfred Bridgeman*, 876 Broadway, New York.—Descriptive Catalogue of Flower Seeds, with practical Directions for their Culture and Treatment.

*Alfred Bridgeman*, 876 Broadway, New York.—Descriptive Catalogue of Vegetable Seeds, &c. We notice in this catalogue an improvement in the way of giving the synonyms of vegetables, which ought to prevent people from buying the same thing under different names.

## CORRESPONDENCE.

GENTS.,—I have 140 Grape-vines in bearing—say 100 Isabellas and 40 Catawbas. Being anxious to have a better assortment, I have prepared the ground for 150 additional vines of other varieties, which I propose to plant in the spring. I have a strong preference for Delawares, but before deciding positively, I should like to have your valuable suggestions. Will you do me the favor to name the kinds you would recommend *for this latitude*, and the proportion in which you would select the 150 vines.

My rows are 8 feet apart. Is the distance of 6 feet apart in the rows sufficient for any kind of vine?

If you can reply to this in the March number, you will greatly favor a constant reader and subscriber in BALTIMORE.

*Balt., Feb. 4th, 1863.*

[We are always glad to oblige you and others to the best of our ability. You do not say whether you want these grapes for your own table or for market, and we therefore make a mixed list for you, as follows: Delaware, 70; Diana, 25, Creveling, 10; Concord, 10; Allen's Hybrid, 10; Herbermont, 5; Rebecca, 5; Cuyahoga, 3; Hartford Prolific, 3; Union Village, 3; Maxatawney, 3; Manhattant, 3. We have put here a few of the less known varieties of good quality, that promise to be valuable in your latitude. The Maxatawney, for example, is a good grape when ripe, and it ought to ripen with you; but around New York it will not mature one year in five outside of a garden. Your preference for the Delaware is well founded, and you can indulge it freely. Whatever you omit from those we name add to the Delaware. You must keep a space, however, for some new grapes not yet out, but which are worthy of a place by the side of the Delaware. We say this understandingly. The distance of six feet between the plants is quite sufficient for any kind of vine. With the rows eight feet apart, as yours are, four feet, or even

three, in the rows, will be quite enough for such kinds as Delaware, Rebecca, and some others of close habit. The distances of your vines and rows, however, must be determined in some measure by the system of training you propose to adopt. If you will let us know in regard to that, we will advise you further.—ED.]

MR. EDITOR,—A capital article that on the *Gladiolus*. We amateurs like articles that have no odor of speculation about them. Will not some one reliable, (say Mr. Parsons,) give us a list of the best twelve Roses, and the twelve next best, according to his judgment. Roses are all superb, magnificent, splendid, distinct, etc., in the catalogues; but after the amateur has included Malmaison, Mrs. Bosanquet, Hermosa, Geant des Batailles, Bougère, Gloire de Dijon, Sydonie, and a few more, he feels uncertain what to select, among the newer ones which are most desirable. Then of Camellias, we need from you a new list of the choicest. So of the *Pelargoniums*, *Phloxes*, *Dahlias*, and *Carnations*. A list of from twelve to twenty-five of each of the above by some one who is not desirous of advertising would be very valuable.

If, instead of raising so large a variety of very moderately beautiful Annuals, our flower devotees would adopt the suggested lists, with a few others, especially including the new gorgeous Japan Pinks, Hunt's Sweet Williams, Verbenas, Petunias, Snapdragons, Hollyhocks, Asters, Balsams—Hem! That's the way it always goes! It's a good theory, but when a body *loves* flowers, he loves the whole family down to the babies. I often say, Well, next year I'll sow fewer seeds; but the spring comes, and pray tell what shall be spared! *Must* have a bed of *Delphiniums*, sowed with the Rocket Larkspur for late bloom. *Must* have a large stock of *Scarlet Geraniums* to bring out of the cellar and plant for show. *Wallflowers* actually demand their rights. A bed of *Fuchsias*

under a lattice overgrown with Clematis; why, that makes a bower for Nansicaa. One can't dispense with an Oriental bed full of tropicals, say, Cannas, Aloes, Gynarium, Tritomas, Ricinus, Reeds, etc. The new Zinnias deserve a good large bed by themselves. And so the Pansies; yes, and new black Pansies by themselves, and the Tropæolums. If any one has a particle of taste, he will have a small bed of sweet Gilia tricolor, and one of Clarkia, and one of Candytuft, and one of Portulaca, and one of Mignonnette, and one of Eschscholtzia, and one of—Whew! Take them all in! You can't spare one of the dear God thoughts and smiles.

But go back again. If you have not room, what gives more satisfaction than the wonderful new Phloxes, (the best I have, if raised in dark heavy soil, is Juliette Rousset,) a few choice Carnations, Dahlias, well-selected Roses, Verbenas, Gladiolus—well, I may as well stop at once; for it would be a longer list than before, if I named all that are superb, magnificent, and gorgeous. *And then I have n't one for sale!* Only be sure and put Gladioli next after Roses. If every thing else weren't so beautiful, I wouldn't have any thing but Gladioli.

Yours, ENTHUSIAST.

[It is not difficult to see that you are an "Enthusiast," imbued with a true love of plants. It is so very natural for such a one to begin with wanting only a few good things, and end with a craving for every thing that grows. We used to be just so; in fact, we are a good deal so still. We will help you with the select lists asked for, and hope Mr. Parsons and others will do the same with plants to which they give special attention. Such lists we believe to be very much wanted. "Dear God thoughts and smiles" is a beautiful idea.—ED.]

MR. MEAD:—*Dear Sir*,—Have any of your readers *succeeded well* with the Rhodo-

dendron or Laurel, as far north as Albany? If so, will they please report through the HORTICULTURIST? State whether the Catawbiense variety or the Maximum does best. Give the details of management, and so greatly oblige,  
AMATEUR.

[We think the varieties of Catawbiense will be found to do well as far north as Albany, and perhaps others. Will some of our readers in that locality answer the queries of Amateur?—ED.]

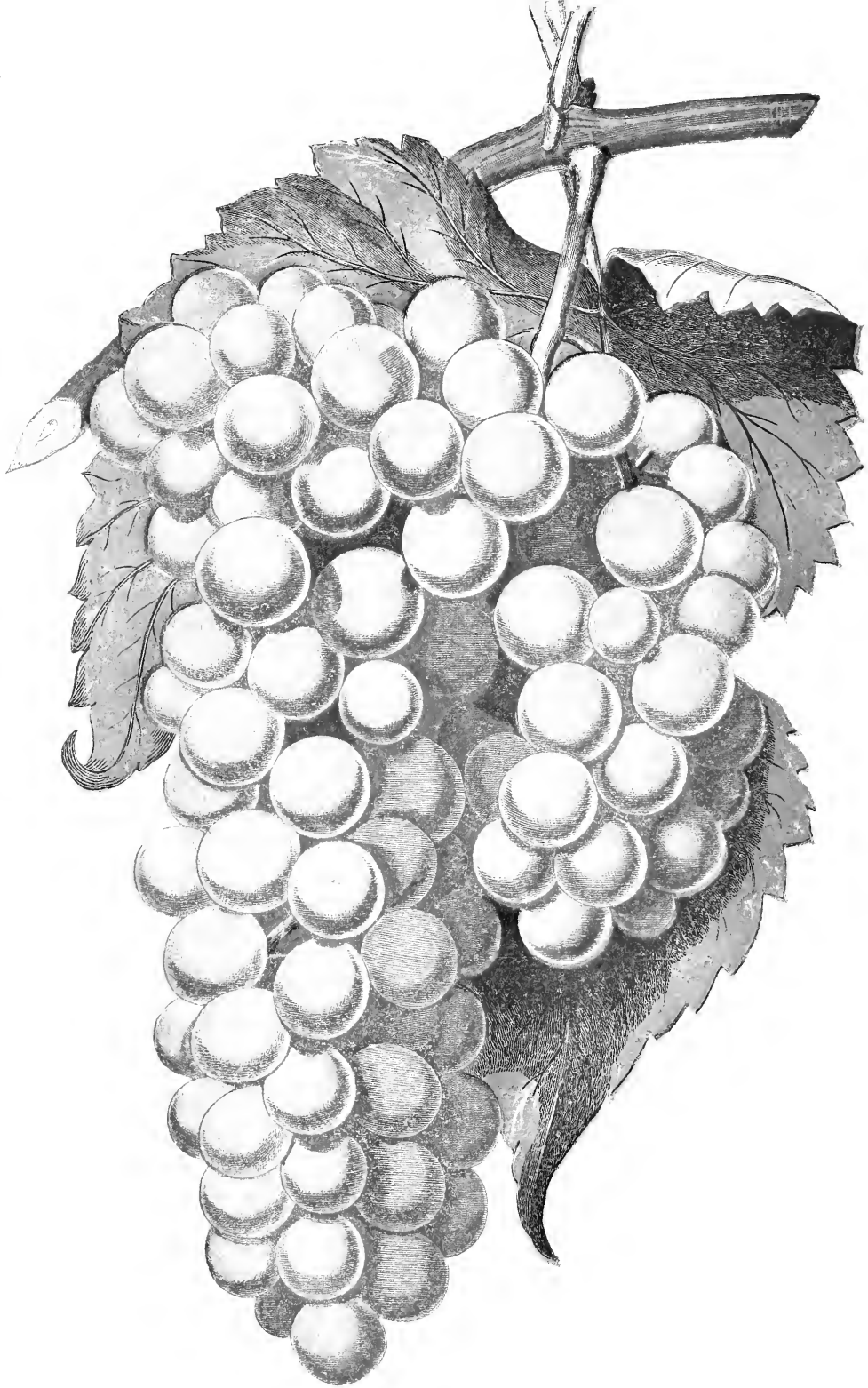
Fayetteville, N. Y.

MESSRS. MEAD & WOODWARD—*Dear Sirs*: Will you give your readers your views of the merits of the Adirondac Grape, as we are waiting for it with much interest? and as Mr. Bailey promised you a specimen in September, we expect that you are able to decide on its value. I am happy to say that with me it has made an excellent grower.

Can you not speak a word in favor of the Anna Grape? With me it is a good grower, and as hardy, if not the hardiest of vines. It ripens well on open trellis, and in quantity of fruit it crowds close upon the Delaware; and I think if more known, would be more generally cultivated, for it certainly is all Dr. Grant says of it.  
AMATEUR.

[We received the promised specimens of the Adirondac, and have given our opinion elsewhere in a former number. Please refer to it. To be sure we can say a good word for Anna. It is sufficiently hardy, but does not ripen early enough for general cultivation. When grown in localities where it will ripen, it is an excellent grape. Its quality has not been overestimated. Under proper treatment it bears well. It requires a light, open, sandy soil, with proper shelter; otherwise it is apt to mildew. It is a good grape for the garden, and will reward you for a little extra attention. The ladies, you know, always reward a little extra devotion.—ED.]





## THE DELAWARE GRAPE.

FROM AN ORIGINAL PAINTING IN OIL, EXECUTED EXPRESSLY FOR THE HORTICULTURIST.

*Engraved on Wood and Printed in Colors by J. W. Orr, New York.*



THE

# HORTICULTURIST.

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VOL. XVIII.....APRIL, 1863.....NO. CCII.

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## Hints on Grape Culture.—XXIV.

IN our last we left the vine at the close of the fourth year, but not yet pruned. In order to help the reader to understand the subject as fully as possible, we have prepared, with much care, and on a large scale, a section of the trellis, with the vines. Our engraver, Mr. S. E. Brown, has executed the drawing with more than ordinary faithfulness. We consider it one of the best things of the kind yet published. The engraving is drawn to a scale of three quarters of an inch to the foot, and is true in all its parts; the reader can, therefore, study it with some hope of being benefited. The vines are represented as pruned. The dotted lines are to be disregarded till a future occasion.

It may be well to pause a moment, and take a review of the subject, as presented in the engraving.

*P* is the end post, to which the wires, *w*, are attached with screw eyes, working in a nut, which may be winged, when it can usually be worked by the thumb and fingers. It is square in the engraving. *A* is the end vine, and has only a single arm, *d*, on the upper course, which fills the trellis symmetrically. *B* is the vine which has heretofore been the subject of our illustrations. It occupies the lower wire. The six spurs marked *o* are two years old; the ten marked *c* are

one year old, being on that part of the arm last laid in. *C* is a vine furnishing two arms for the upper course; the arm *a* is shown its full length; the arm *b* is shown only in part, the size of our page not allowing us to show more. On the right of *C* is seen the end of the arm of the adjoining vine of the lower course. The whole trellis is covered by two courses of arms, in the manner here shown; the other end being finished by a vine with a single arm, like *A*. This single arm may be on either the upper or lower course, according to circumstances, though we prefer to have all the single arms on the upper course. The reader will observe that the arms are all well balanced, being equally divided on each side. This is important, in order that the sap may flow equally to both. It will be observed, too, that no part of the vines is shaded. Every thing, indeed, is well ordered. The canes proceeding from the short spurs, *i* and *k*, in the middle of each vine, not only serve to keep up a continuous root action when the vines are pinched, but they are always ready to supply the place of the old arms in case of accident. They are safety valves in more senses than one, and form a very important feature in this system of training.

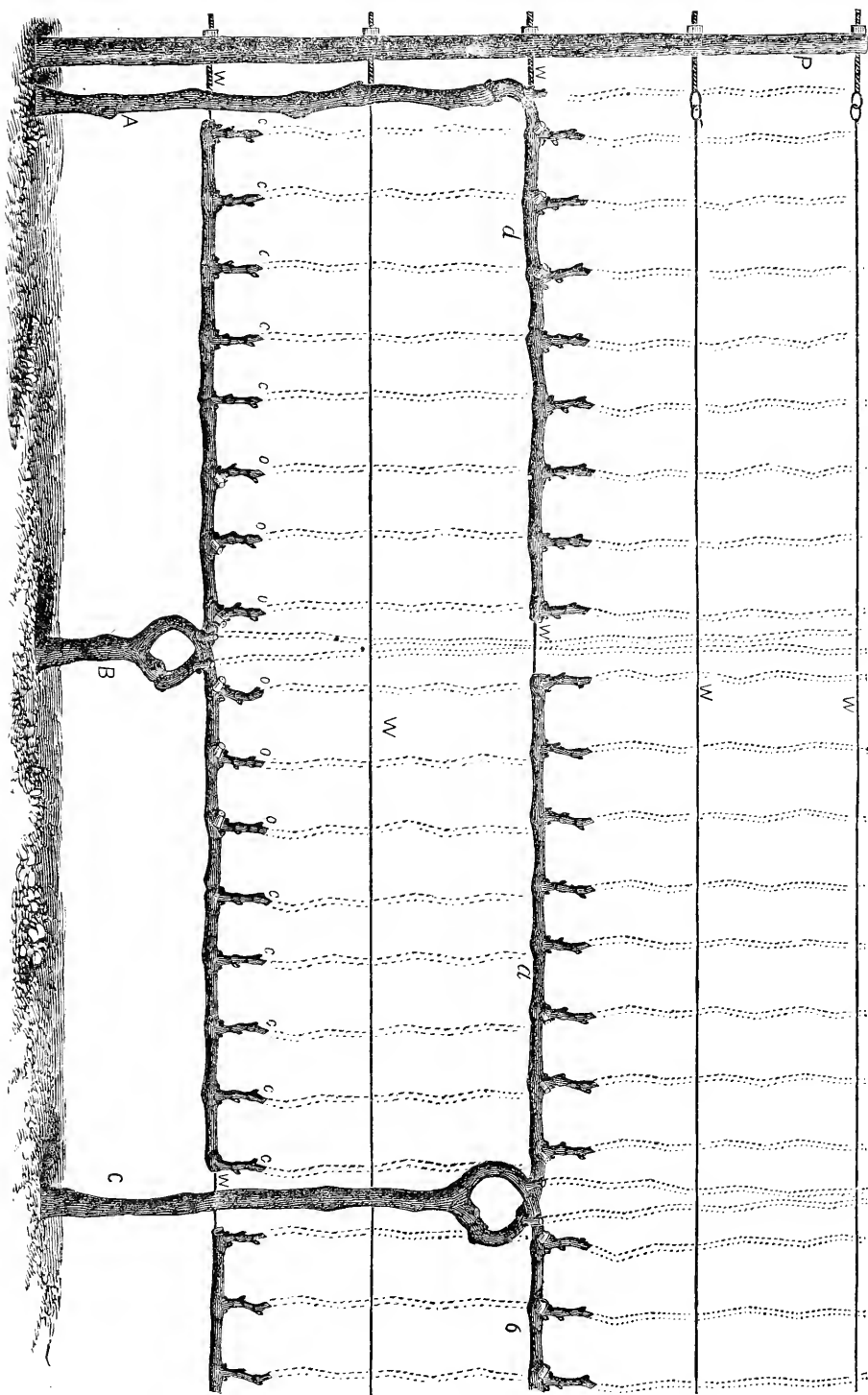
Let us now turn to the pruning, as shown

already completed in the illustration. The two middle canes (*i* and *k*) are cut down to a single eye each. On each side of these are three spurs marked *o*; these occupy the places of the canes that were cut down last year to three buds. The reader will remember that the spurs last season were formed of three buds, the top and lowest only being retained, and the middle one rubbed out. The present spurs are formed from the cane that proceeded from the lowest bud, all the rest being cut off, as indicated in the engraving. The process consists in cutting off the old spur at the base, and then pruning the lowest shoot to three buds. In our next we shall describe this process minutely, and illustrate it with drawings nearly of the natural size. On the ends of the arms are five spurs marked *c*. These are formed of the canes that proceeded from the five buds left at the last pruning, when the arms were extended and completed; these canes being now cut to three buds, as before described. The arms are now completed with spurs. They will be reproduced each season in the manner already indicated, but which will be more minutely described in our next, since it is one of those interesting points in grape culture over which we may profitably pause for a while.

The vine being pruned, let us suppose it has passed the winter, and is ready for the growth of the fifth year. The vines having been tied in their places, the first operation will be plowing. This must be simple surface plowing, so as not to cut up the roots. Weeds must be kept down by the occasional use of the horse hoe. The ground must be kept clean and mellow, as before explained. If the reader has paid attention to what has already been said on the subject, he will understand fully what is now to be done. We will therefore turn from the soil to the vine. The operations are chiefly those heretofore described. From each of the spurs, *i* and *k*, a single shoot is to be taken, and allowed to

grow unchecked, except that the laterals are to be pinched in. The middle buds on the spurs *o* and *c* are to be rubbed out, and the top and lower buds only left to grow. The fruit on the lower shoot is to be removed. The shoots from these spurs must all be stopped at the third wire, and the laterals pinched in. In other respects, the treatment is the same as heretofore directed.

Next let us see how much fruit may be expected during the fifth year. The canes from *i* and *k* will yield three bunches each, as will also the canes from the six spurs marked *o*. The canes from the ten spurs, *c*, should not carry more than two bunches each. Next year they may be allowed to bear three. Thus we have, altogether, *forty-four* bunches of grapes, which ought to weigh half a pound each; indeed, Isabella, Catawba, Concord, &c., ought to average more than this. We have, with this average, twenty-two pounds of grapes from a cane eight feet long. This will compare favorably with any *eight feet* of cane in the grapery; and there is no doubt about it. The vines next year will yield three bunches from each cane, which will probably give a sum total of twenty-seven pounds of grapes to each vine. The weight of the bunches, of course, will depend, not only upon good culture, but somewhat upon the kind of grape. There are few good grapes, however, that will not produce bunches of half a pound weight. We have some that will give bunches weighing nearly a pound each. We allude to the weight of fruit at this time simply to give the reader some idea of what may be anticipated in the yield of fruit from each vine under favorable circumstances. We do not, however, always allow three bunches to each shoot; in this we are governed a good deal by the kind of vine and its vigor, as will be fully explained hereafter. Where only two are left, their size is materially enhanced. Good treatment, of course, must be given to realize these results.



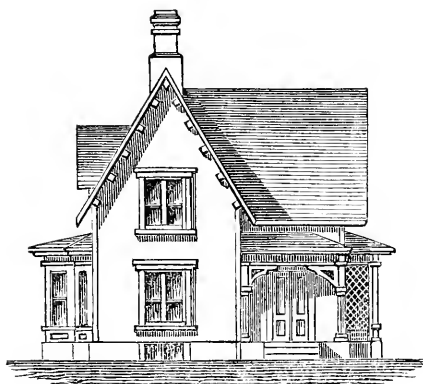


FIG. 9.—Front Elevation.

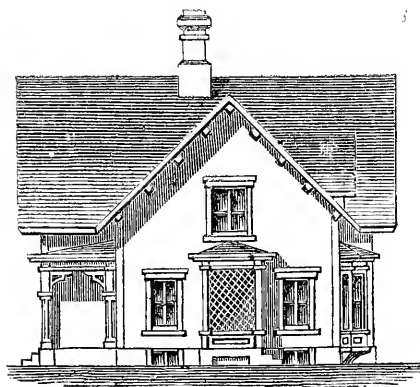


FIG. 10.—Side Elevation.

## COUNTRY HOMES.—DESIGN NO. 3.

BY GEO. E. WOODWARD, ARCHITECT, NO. 37 PARK ROW, NEW YORK.

THIS design is similar, in some respects, to design No. 2, and gives, perhaps, the most compact arrangement of rooms for a building having so irregular an outline. Exteriously considered, there is much to be admired in variety and light and shadow, the different elevations being entirely unlike each other, and affording a constant change from every point of view; an object, we think, very much to be desired in cottage architecture, and when well managed never fails to make a pleasing impression. A high, bold appearance, without the overhanging eaves or depth of shadow, is not suitable for a country house; a feeling is created that something is wanting to make up the accessories of an agreeable habitation.

dumb waiter connects the kitchen with the dining room, and thus saves many steps.

The first floor (Fig. 12) gives parlor,

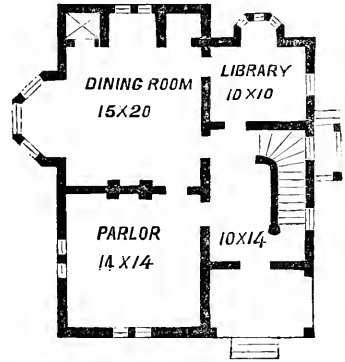


FIG. 12.—First Floor.

dining room, and a library, with a roomy vestibule, and a side door or private entrance, and supplies all the wants of a small family. The library might be used for a bed room. On the second floor (Fig. 13) are 3 bed rooms with closets.

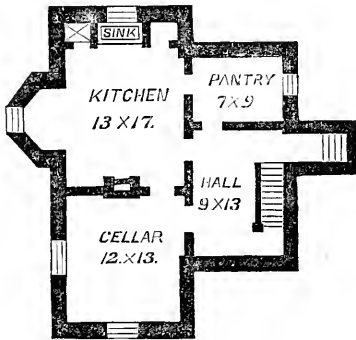


FIG. 11.—Basement Plan.

In this plan, (Fig. 11.) the kitchen is in the basement, convenient to the cellar, and with a good pantry attached to it. It is put there for the purpose of economizing in the construction. Our own preference is to put the kitchen in a well-ventilated wing on a level with the main floor, and thus avoid, as much as possible, the necessity of running up and down stairs. This can be done at any future time when desired, as, indeed, can any addition of other rooms be made to meet the wants of an increasing family. A

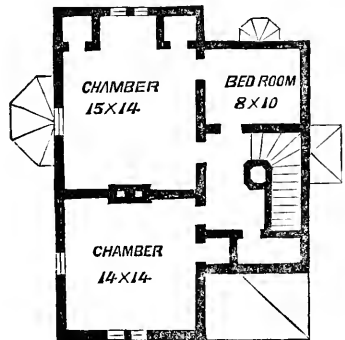


FIG. 13.—Second Floor.

The engravings are intended to tell their own story as far as possible, and but little explanation is necessary to make them fully comprehensible. In the matter of cost, one can hardly give a price that is reliable; the

enormous advance in some building materials and slight advance in others disarrange all old standards of estimating. Localities, of course, have much to do with the cost; yet, above all others, the business management must be considered. A good manager, thoroughly familiar with the qualities and values of materials, who knows how to direct labor to the best advantage,

will execute work at a less cost than one who undertakes his own building without a previous training. If, however, the question were directly put to us, we should answer, that we will contract to substantially erect and completely finish such a house for the sum of \$1,400, where materials and labor do not exceed a fair average of value.

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#### LETTER FROM JAPAN, FROM MR. THOMAS HOGG.

WE have the deep gratification of laying before our readers another letter from Mr. Hogg, dated December 29, 1862. It will be seen what good use he has made of the short time he has been in the country. In a private letter he writes, that his health is good, that the country is very pleasant, and that he has already made quite a collection of choice things. But the reader will be anxious to see the letter, and we give it without further remark.

KANAGAWA, JAPAN, *Dec. 29, 1862.*

P. B. MEAD, Esq.—*Dear Sir,*—After many delays and the ending of a long sea-voyage, you may readily imagine the delight I experienced on my arrival here on the 22d of August, and the realization of long-cherished hopes of visiting this strange land. It was about ten days after our arrival on the coast before we reached this port, and during that period we were several times very close to land, so that I was enabled to see somewhat of the general aspect of the country. The shore on the southern coast is bold and hilly, to a considerable extent wooded and apparent waste land, and sparsely inhabited. This, however, is only apparent from the custom of the people living altogether in the valleys and sheltered nooks, out of the way of storms, which their frail houses can not well withstand.

The sides of the hills are seldom or never cultivated with cereal or vegetable crops, but are chiefly planted with timber trees, which are carefully cared for by the laws of the country. As we proceeded north the hills became less abrupt until we reached the

coast of a large extent of level country. Approaching the gulf at Yedo, the country again becomes hilly, and the volcano island at its mouth has an elevation of about 4,000 feet. The shores of the bay presented an exceedingly attractive appearance on the delightful summer evening we sailed up. The great center of attraction was Fusi-yama, with several streaks of last year's snow on its summit, towering far above the surrounding mountains, and inviting the explorer into its forbidden paths. At the present time it is covered with its winter mantle, displaying its greater height, and in strong contrast with its neighbors, which are still dark and somber.

It being quite late in the evening when I landed, my curiosity to see the things I had heard of had to remain unsatisfied until morning. You may be sure it was not long after I arose, before I was making a tour of inspection in the adjoining garden. At the kind invitation of a friend connected with the leading American house here, I made their house my home for a while. Attached to the dwelling they have a garden filled with a large collection of Japanese rarities, some of which I readily recognized from the published descriptions of Fortune's and Veitch's collections. How I wished I could transport as they stood some of the specimens of *Thujiopsis dolabrata*, *Retinosporas*, *Junipers*, *Abies*, *Pinus*, *Osmanthus*, *Podocarpus*, &c. *Thujiopsis dolabrata* has been pronounced, and perhaps justly, the finest evergreen in the country; but the *Retinospora* may fairly claim a portion of the honor accorded to it. There are 8 or 10

species and varieties of it, and if they prove hardy with you, they will be invaluable acquisitions. A weeping variety, similar in appearance to the weeping Chinese Arbor Vitæ, but much finer, is one of the most beautiful pendulous trees I ever saw.

The tendency of foliage in this country to assume a variegated character is one of the peculiarities well known to you from the number you already have in cultivation, that have been introduced from here. I was surprised at finding, in addition to those I was familiar with, so many others, not only native plants, but those from other countries. I have made quite a little collection, in hopes of soon having a favorable opportunity of sending them home. Among them are variegated *Osmanthus*, *Podocarpus*, 2 or 3 varieties, *Eurya latifolia*, 3 varieties, (fine,) *Camellia sasanqua*, *Juniperus*, 2 or 3 varieties, *Cryptomeria*, *Saxifraga sarmentosa*, (a beauty,) *Kadsura Japonica*, *Rhyncospermum*, *Gardenia radicans*, (fine,) *Thujiopsis dolabrata*, *Kerria Japonica*, *Retinosporas*, *Farfugium grande*, (silver edged,) *Cleyera Japonica*, *Salisburia*, *Viburnum nitidum*, *Serissa fœtida*, *Ligustrum*, and others. I have also made a small collection of about a dozen sorts of Japan Maples. How many species there are among them I am unable to say; probably 3 or 4, and the remainder only varieties. If they too are hardy with you, they will also prove valuable additions to your ornamental lawn trees.

The *Cryptomeria* is the most extensively planted tree for timber in the country, and is used for a variety of purposes in building. Wherever you go you will find plantations of it in various stages of growth. It is usually felled when from 6 to 12 inches square. The wood most frequently used in manufacturing fine furniture, fancy boxes, door panels, and wherever solid work is required, is the *KI-A-KI*, a species of *Planera*. Wide planks of it are brought to market, and the wood, when polished, has a beautiful grain, and is valuable for the purposes for which it is used. *Pinus densiflorus* and *P. Massoniana* supply the largest timber, and are extensively used for all sorts of heavy work.

The *HI-NO-KI*, or *Retinospora obtusa*, is also much used for light work. The wood is white and very tough; long shavings taken from it, and dyed various colors, are manufactured into beautiful mats, about 6 feet long and 3 or 4 wide. They are exceedingly pliable and soft; more so than Chinese matting used for floor coverings.

I have only seen the *Sciadopitys* in a cultivated state. There is a beautiful specimen of it in a temple yard a few miles from Kanagawa, which, for perfect symmetry of form, is equal to any thing among *Conifera* I ever beheld. It is much cultivated by the Japanese gardeners, and deserves all that was said in its praise in the "*Gardener's Chronicle*."

The *Cryptomeria* is hardly behind either of the others for beauty, and is certainly one of the finest evergreens, and I can not but regret its want of hardihood with you. Its dense, dark foliage is very conspicuous, though having in large masses rather too somber an appearance. There are several varieties of it, some of them quite dwarf, and they will take a place with the dwarf Spruces in ornamental gardening. Neither *Thujiopsis dolabrata* nor *Abies firma* is found in any considerable quantity near here, yet there must be large trees of them not very distant, as well as of the *Sciadopitys*, as I have had no difficulty in procuring seeds of them all. *Abies firma*, or *A. bifida*, which is the same thing in a young state, will undoubtedly prove hardy, as I have procured seeds of it, with other *Conifera*, from Fusi-yama. The cones of it vary according to the locality it comes from; those from the mountains being short and almost smooth, while those from warmer sections are long, with prominent spur-like appendages to the scales.

The *Camellia*, with its bright shining foliage, stands pre-eminent among broad-leaved evergreens. Its favorite place seems to be gravelly banks of water courses, and there it usually attains its greatest size. This, however, is not always the case, as the largest single specimen of it I have seen stands on high ground on the margin of a pine wood, away from the water, and a noble specimen it is,

of the dimensions of a respectable sized apple tree. *Camellia sasanqua* has just passed flowering, and seeing it in bloom so early has impressed me that much remains to be done by the skilful horticulturist in producing a race of early flowering double varieties, of which this species will be the parent. You are well acquainted with the double sort already in cultivation, the flowers of which are small, but the single ones are large flowered.

In my walks over the surrounding hills I frequently come across *Pittosporum tobira*, covered with the *Aphis* that attacks it and *Oleanders* with us, when crowded and confined in green-houses. The leaves, too, are covered with dust adhering to the sticky substance with which they are covered in the same manner. The same also with the black thrip that attacks *Azaleas* under similar circumstances, and I have no doubt both nuisances were imported with the plants.

Chinese *Azaleas* are planted in quantities near temples, chiefly bordering the main entrance walk, and appear to be mostly of the *A. lateritia* style. I expect a treat next spring when they are in flower, and I hope to pick up some new varieties.

Not least among novelties are the variegated *Selaginellas*. How to describe them to give you a proper idea of their peculiar beauty is almost impossible. Imagine the changeable hues of *Lycopodium cæsium* to be orange, yellow, and crimson, and you will form some

conception of their colors; others, again, have their leaves tipped with white in various ways, pink, and different shades of green. Altogether, they are horticultural gems; the more you examine them the more they are appreciated. In addition to these, I have met with variegated (gold and silver striped) *Orchids*. I am unable to say what they are. They have the growth of *Dendrobiums*, however, and I think possibly they belong to that genus. I have not seen them in flower. Also a fine showy fall flowering *Hibiscus*, similar, if not identical with our *H. palustris*, with double flowers. It is quite showy, and would make a fine shrubby plant.

Although many foreign plants are cultivated, strange to say, I have not seen a *Geranium* of any kind, either scarlet or show, or a *Verbena*. The old China Rose is grown, and one or two sorts of running roses, which, from their general appearance, and from description, I think must be new; they resemble the *Noisettes*, and perhaps may prove to be such.

My residence is so recent, and the field so extensive, I can only claim to have had a glimpse of what surrounds me, and shall not pretend to embody in one letter all that is to be said and seen. With the hope that my imperfect descriptions may interest some of your readers as well as yourself,

I am yours, &c.,

T. H.

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## A TWIN CAMELLIA.

BY THE EDITOR.

NATURE sometimes presents us with examples of very singular departures from her normal condition, such as variegated foliage, drooping branches, inverted flowers, &c. Mr. Weir, of Bay Ridge, L. I., has sent us a very beautiful specimen of this kind, in the shape of a twin *Camellia*. Thinking many of our readers would be interested in it, we have had prepared a very good portrait of it. Fig. 1 is a front view of it. Fig. 2 is a back view. By referring to Fig. 2, it will be seen that there is but one bud. In this case, the

calyx contained two germs, which, on opening, formed two perfect flowers. The petals forming the back or base, however, are so disposed that the whole has the appearance of *three* flowers, that at the base being perfect in every respect except the eye. Altogether, it is a very interesting and beautiful thing. The variety is the old *Alba Plena*, or *Double White*. We have seen other specimens of twin flowers of this *camellia*, but none so perfect and interesting as the one before us.



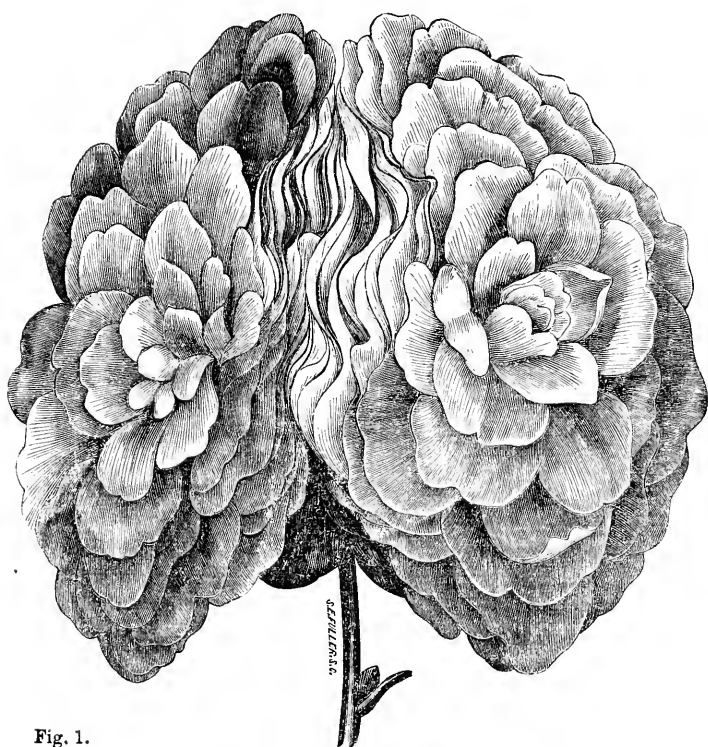


Fig. 1.

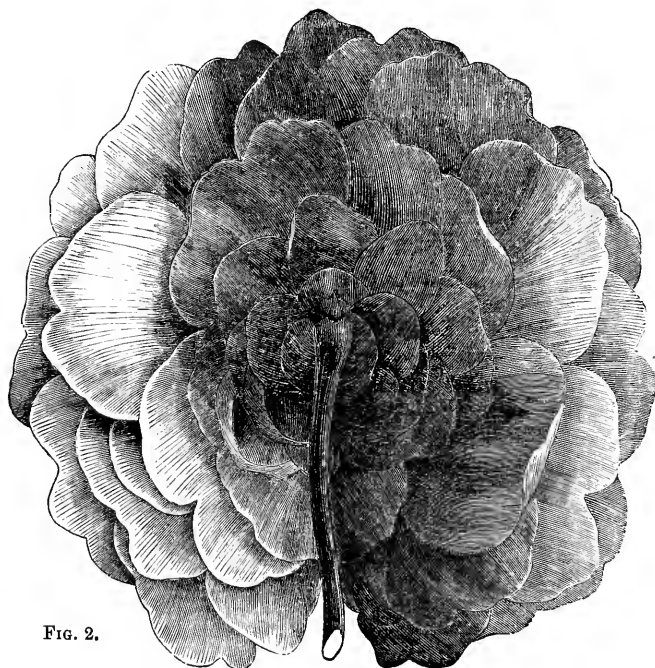


FIG. 2.

## CULTIVATION OF MUSHROOMS.

BY RICHMOND.

THE cultivation of mushrooms is a process in gardening perhaps the most singular and curious of any. In the culture of any other vegetable, we either sow or plant something material—a seed, slip, or root—which we both see and handle; but in the culture of the mushroom, we neither sow nor plant any seed which is visible, at least to the naked eye. Yet it is certain that mushrooms are produced by seeds, which naturally vegetate in the field, at certain seasons, and which may be made to vegetate artificially at any season by a certain process, and by a composition in which stable manure forms the chief ingredient, which shows that animal matter is necessary to the vegetation of the seeds, or spawn of mushrooms. Hence we find them produced plentifully in old pastures, or in places frequented by horses, cows, or sheep. But this vegetable may be produced artificially, by first making bricks, or what are sometimes called cakes of spawn, and afterwards placing them on a slight hot bed, where the spawn vegetates into complete mushrooms, in which process of making the spawn, as it is termed, different ingredients are used, but chiefly short stable manure. This business of spawn-making is generally performed by nurserymen, who manufacture it in large quantities, as an article of trade, and it can generally be procured from them, or of any of the seedsmen, at any season, which is preferable to attempting to make it by any one inexperienced in its manufacture, and which would be almost certain to result in failure.

The proper time to make the beds is early in September, which leaves seven months for production; that is, up to the 1st of June, after which time mushrooms produced in artificial beds become wormy very quickly, in consequence of the warm weather; but it is well worth the trouble and expense to form mushroom beds at any time through the winter and up to the 1st of March, as the produce, even during two months, will be very considerable, if the beds be well managed;

besides, at the latter time beds may be made in sheds or in the open air, and covered with a temporary roof to keep off rains; and by being well covered with salt hay or straw, can be kept of the proper temperature for the production of mushrooms; a thing which can not be done during winter, except in the green-house or a warm cellar, or shed built for the purpose, and having a flue or hot water pipe in it. In Europe they have structures for the purpose, heated with a flue, the temperature being kept at 50 degrees Fahrenheit. They are also grown in sheds without fire heat during the severest winters there, by being kept well covered, as above.

Light is not necessary for the production of this vegetable; and the absence of it may be even a benefit, as preventing a too rapid evaporation of the surface. Consequently, they can be grown in a dark warm cellar as well as any other place. Beneath the staging of a green-house is also a very good situation for a bed, if only protected from drip; but wherever made, it must be secured from moisture at bottom, by laying a foundation of cinders or gravel six inches thick. The manure to be used in making up the bed must have been frequently turned, until it becomes of the proper sweetness; so that it will not burn or become very hot afterwards. It is then in order to begin with, the coarsest part being laid on the foundation, and the bed finished with the finest, leaving the bed a little highest in the middle. All should be lightly beaten with the fork, as in making a common hot-bed. It may be left in this condition for a few days, before inserting the spawn. Examine the bed by thrusting the hand five or six inches deep; and if not too hot, insert the spawn immediately. If the manure has been properly fermented, there will not be any danger of the spawn being killed by too much heat. The spawn should be broken in pieces of the size of a hen's egg, and distributed over the bed eight inches apart; after which the earth may be put on two or three inches deep. Any light sandy soil will answer, it

being immaterial whether it be rich or not, its only use being for the spawn to run in. No water need be given at present, or until the spawn begins to run, which may be ascertained by putting the hand a few inches deep in the soil, and examining what you bring up. If the spawn be working, you will observe the small threads of it; but generally you will be able to judge of its success by many spurious fungi appearing on the surface. Now is the proper time to give the first watering, which must be thorough. Cold water should never be applied to mushroom beds; it ought always to be rather warmer than the temperature of the bed. It is usual to cover the beds lightly with hay, as it preserves the surface in a genial condition for the full development of this species of vegetable. If it happen that no mushrooms are produced in six weeks, examine the bed. If the spawn has not spread, it must be fresh spawned, if in the green-house, or where the temperature is sufficient; but if in the open air, new beds must be made. There is a means by which beds, when they have stopped bearing, have again been put into active bearing. This is done by inserting a crate or large box perforated at the forming of the bed, which can be emptied of its contents, and filled with fresh heating materials.

They can also be grown in boxes, two or three being brought in every two weeks, and placed on the flue or hot water pipe of a green-house. A nice supply can thus be got. For this purpose, the shortest materials from the stable should be used, and so thoroughly dried as not to ferment when put in the boxes, which should be managed as above, with the exception that more water may be necessary. But the best process for obtaining mushrooms, that I know of, consists in making up a bed of alternate layers of manure and earth, the manure to remain unbroken, unfermented, and to be thoroughly dried. This bed should be about two feet or more in height, and so attended to, that no fermentation shall arise at any time. When completed, it should be spawned in the same manner as other beds, and will produce twice the quantity of mushrooms as an ordinary bed, and continue long-

er in bearing. It must, of course, be made in a warm place, as without some little warmth it would be likely to remain an inert mass for several months.

Mushroom beds are subject to many mishaps, usually from excess of moistness or drought. The only safe way is to avoid all extremes. In gathering the crop during winter, it is very judicious to cut them off carefully with a sharp knife; but during spring and early in summer it is better to twist them carefully off, for the reason that any old stumps left are certain to breed worms, which infest mushrooms as the season gets hot. During winter no such trouble will arise; and by cutting the mushrooms, the many small ones at their base are allowed to come to maturity. I think salt water applied to the beds occasionally might act as a preventive to worms. I do not think it would be injurious to the crop, at any rate; and my reason for saying so is, that I saw a quantity of mushrooms growing on a salt marsh last September. I have also eaten of them; so have many others in my neighborhood. If a small portion of salt were used in forming the beds, there would be much less need of using water. I have tried a weak solution of salt and water on a part of a mushroom bed now in bearing, but sufficient time has not elapsed to fully test its utility.

[The "proof of a pudding is in the eating;" and the proof of "Richmond's" pudding consists in a basket of remarkably fine mushrooms left at our room with this article. They would be considered fine specimens at any season. They made a delicious "broil." The artificial culture or forcing of mushrooms is by no means common among us. We think it might be made a source of profit, as our large city hotels would no doubt buy them freely in the winter, and pay a liberal price for them. They can be grown with less trouble and expense than some other forced crops, and we think would pay quite as well. "Richmond's" method is one of the simplest, and the results show it to be excellent. We have had mushrooms come up quite freely in early spring in newly formed grape borders. In

one instance, the border was made up largely of the top spit of a reclaimed swamp, the muck of which was as black as night and soft as a piece of velvet. After having been drained, it was laid down to grass, and pastured. The "top spit" of a portion of this was used in the compost for the grape border; and in the following spring this border (inside the house) produced a plentiful supply of very fine mushrooms. Lest the opponents of muck should jump to sudden con-

clusions, we will add here, that that border has continued up to the present time to produce as good wood and good fruit as we have ever seen, with a marked freedom from mildew or blight in any form whatever.—In regard to salt, we should advise it to be used sparingly as an experiment, the application to be made before the spawn begins to run. To make the experiment satisfactory, however, the salt should be applied at times in different quantities, and the results noted.—ED.

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### TREES BY THE WAYSIDE.

BY W. BACON, RICHMOND, MASS.

IN one of our pleasant villages, in Western Massachusetts, a Rural Improvement Society was started, a few years ago, under very favorable circumstances. From some cause, not fully understood by us, however, a division of feeling sprung up in this association, which led to a division of action, and the seceding party went to work in earnest, to show the "*old line*," as they termed it, that they were capable of doing something pretty fair. Accordingly, one of their first acts was to set apart the *first of May* for transplanting trees by the wayside. As their village was already ornamented with beautiful avenues of trees, they had nothing to do at home, and a highway was selected as the field of their enterprise quite beyond the precinct of village limits, and a mile of naked road was, as it were by magic, transformed into a beautiful avenue. The trees were small, to be sure, and, of course, not very shady to begin with; but we saw them last fall, just as their foliage was passing into the sere and yellow leaf, and their vigor gave us assurance that in due time they would become "tall old trees," with their branches interlacing in the same kind spirit that pervaded those who took them from the forest, and gave them a local habitation amid the more busy haunts of men, where their symmetrical forms will be subjects of admiration, and their umbrageous shades will yield refreshing coolness amid the intensity

of summer's heat to the successive generations who may seek quiet and comfort beneath them.

Similar associations can not be too numerously multiplied in our country. Rural improvements open a field of labor everywhere, and until this field is occupied and brought into proper shape, we have need of such labors. By their performance the country is made more wealthy; the actual value of real estate will ever stand the highest, where the people do the most to beautify and adorn it.

It appears very strange that such associations do not spring up in every town, and show their good effects. It certainly is not because they are expensive. A few hours in a year, devoted to the object, is all the tax that is necessary. Let the plan be adopted, and the day set apart for each one to meet and work, and this is all the necessary preliminary. Who would not feel happier, after spending a day with his townsmen in such an employment? Yea, doubly happier—happier for the noble work accomplished, and happier for the social intercourse with his friends and neighbors in bringing about that accomplishment.

But we have digressed from our first intentions in penning this article. We commenced with a view of giving our ideas of trees suitable for roadside planting; and here we remark, that we know of no tree unsuita-

ble for this object, where soil and locality will favor its growth. Therefore, where rural beauty is the object, as large a variety as circumstances will permit, should be introduced; and, in introducing, those kinds presenting the greatest contrast should be brought in juxtaposition. The Poplars are among the first to put on the regal attire of spring, while the Chestnut and the Oak stretch their bare arms to the tempest almost until its last echoes have died in the stillness of summer. Yet these last retain their foliage in beauty long after the leaf of the Aspen has ceased to flutter in the breezes of autumn, and has come down to mingle with the dust that fed them. The Maple's symmetrical head, formed as true as though it had received its finishing from the chisel of the turner, is a beautiful contrast to the broad top of the Elm. The Beech and the Birch, though of different dispositions, make excellent neighbors. The Tulip tree and the Ash may occupy neighboring positions to great advantage; indeed, we may go through the realm of *Sylva*, and find very pleasant contrasts and counterparts that are worth caring for in ornamenting our waysides. Evergreen trees should be occasionally thrown in, not only for the contrast, but for their beauty. The Pine, the Fir, and the much-abused but elegant Hemlock, are, at proper seasons, transplanted with as little risk as the Maple and Elm, and in their proper soils are of as thrifty and symmetrical growth. It is no objection, but rather an appreciable quality, that the summer breeze sighs and the winter winds howl through their branches. To us it is music, sweet and solemn, whether softened to chord with the note of birds by the heat of harvest, or ren-

dered harsh by Borean eloquence in the night of winter's year.

But a little more labor and care will be necessary in a sweet intermingling of variety, than is necessary where all the trees are of the same variety; and the after effect, where the former course is adopted, will in each successive year, and in all years, more than counterbalance it.

Another objection to the usual mode of setting trees is, that they are allowed to grow too thick. In the early years of their growth, this may not be realized. Indeed, the sooner their tops will shade the ground, the more rapid will be their growth. But, where they are set so thick as to favor this object, calculation should be made to cut out and remove at least every other tree. They must have room in order to a perfect development; and this development, varying in species and varieties, is an essential part of their beauty.

[We have known of many instances of divisions in societies, but this, we think, is the first instance we have heard of in which positive good resulted from it. It appears quite as strange to us as it does to Mr. Bacon, that rural improvement societies are not very much more common than they are. We understand perfectly well why horticultural societies do not flourish in most of our large cities, but we do not understand so well, why similar associations are not common among our rural population. They might do an incalculable amount of good in beautifying the country and elevating the tone of social life. We commend Mr. Bacon's remarks to the attention of all our readers.—ED.]

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## LANDSCAPE GARDENING.

BY J.

LANDSCAPE GARDENING is defined as being the art of appropriating or securing all that is useful and beautiful of which a given place is capable of furnishing, and of arranging its materials or natural advantages

so as to best effect these objects. We have in this formula a foundation for any attempts we may make in this art. In working out these ideas, many things present themselves, requiring a full comprehension of what o

the beautiful may be secured and preserved, and what blemishes may be improved or screened from view. Those arrangements of roads and walks that secure directness and easy approach to buildings and the various divisions of the ground, and command the best views in connection with them, in a manner that is most pleasing to the eye, and which are best adapted to the prevailing ground surface, are among its first requirements. Such appropriation and arrangement as shall shut off unsightly objects, and open views that are pleasing, adapting such forms and proportions as will harmonize with the extent and prevailing expression of the place, and the securing variety of form and unity of design, while it avoids any thing that will injure the obtaining the greatest beauty of which the place may be capable, are all equally necessary to carry out these objects. These various requirements can not be obtained by mere imitation, as in copying from Nature or the works of others. Each place has peculiarities of its own. Location, exposure, soil, surface, surrounding objects, extent, and convenience, present a variety of claims that can not be applied with equal force to any two places. Ideas and suggestions may be acquired from many sources, but the skilled landscape gardener will avoid copying the works of others, and rely mainly upon his own resources in applying suggestions which are appropriate to the ground he may attempt to improve. Much has been written upon landscape gardening that tends to make the subject intricate and obscure, rather than to enlighten and improve in the art.

Like other arts, in its working it demands experience, taste, cultivation, education, and a great variety of resources to catch and appropriate the prevailing expression of each particular place, so as to bring out its best qualities, give the greatest variety of form, and conceal what is repulsive to sight.

Many who write or compile the ideas of others so as to make a pleasant article to read, fail utterly in giving such instructions as are useful in the working; and some we

have known who, in attempting to work out what they have written, have fallen into inexcusable errors. We therefore believe mere theory will not make a good landscape gardener. It needs not only the power of a clear perception of the capabilities and wants of each special locality, and such knowledge and resources as are requisite to the accomplishment of certain results, but also the genius and skill to work out these desirable ideas.

A person may be very enthusiastic in admiring the beauties of Nature and Art, but wholly incapable of imitating the one or the other; as one may admire a fine painting or eloquent speaking, but himself be unable to accomplish either. Most beginners who attempt any thing in the way of rural adornment generally begin working with simple straight lines, or with geometrical circles and figures, and by copying and repeating the work of others. There is perhaps in every one a constant tendency to go back to these formal lines, and to repeat the same forms and objects. The old straight avenues, the planting of trees at equal distances from each other along the roads and walks, the balancing of a curve, tree, or other object against another, the straight slopes, the level surfaces, the perpendicular terrace, the straight and stiff lines along the sides of curved walks, and the sharp and harsh outlines of buildings and trees, are among the things to be seen almost every where. These are all inconsistent with the modern popular style of landscape gardening.

One of the peculiar characteristics of this style is its easy flowing and soft waving lines; this forms one of its fundamental and pervading features; and to be consistent, these should be carried into all its various objects and workings. All surfaces of the earth, whether flat or precipitous, and outlines of other objects, should be made to conform to these lines, and thus all be made to combine in producing a harmonious effect with each other. It has been said, that in Landscape Gardening the expression of design should be such as to point it out as a

work of Art, otherwise it may be mistaken as a production of Nature, in which case it would lose its beauty of design. This is given as a reason for regular forms, flat surfaces, and uniform divisions. The proposition, though apparently true at first sight, is not so in result. The preserving in most cases nearly the natural surface of the ground, and smoothing the rough surfaces, with the nice working of curved lines and the introduction of pleasing forms and divisions, at once stamp it as the work of Art, and sufficiently distinguish it from the productions of Nature, while it has the advantage of employing those lines and forms that are the most beautiful. Where great changes and new surfaces of a striking character are attempted, it often results in failure to accomplish the object sought. Much experience and art are required to make such changes satisfactory, and it is only under favorable circumstances that they can with profit be attempted. All roads and walks, therefore, in their direction, in the working of their edges, and forming of their surfaces, should have a pleasing curved outline. The grouping of trees should be done with reference to their sky line, and should be brought down to the lawn in easy and graceful curves. Lawn surfaces should be curving and undulating, and never a dead level or flat surface.

The sharp outlines of buildings should be softened by the planting of trees, shrubs, and vines, thus forming and preserving beautiful lines by the skillful arrangement of various objects, and by ingenious covering of unsightly features, and the screening of straight and angular objects and boundaries.

These are among the chief features, it seems to us, that unite in forming those exquisite scenes we sometimes meet with, where the gifted landscape gardener has shown his genius and talent in making land pictures, which are a source of the highest pleasure to multitudes, and which are doing much for the education of this nation in the love of this beautiful art. And not least worthy of our gratitude are those gentlemen who liberally employ their abundant means in these works, and who open them freely to the enjoyment of others.

[Landscape Gardening may well and expressively be called the Art of Appropriation; and it is just as truly an art as Painting is; in its higher developments or manifestations it may very fitly be called twin-sister to it. The analogies between them are very striking. We would suggest that J. follow the subject up in this connection. It can be made very interesting, and he has presented good evidence that he has the ability to do it.—ED.]

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## THE DELAWARE GRAPE.

(See *Frontispiece*.)

BY THE EDITOR.

It may be remembered, that in our early notices of the Delaware grape we predicted that bunches weighing half a pound or more would become quite common under good culture. This prediction was based upon experience with vines that had arrived to some degree of maturity under good treatment. What we had done, we confidently believed that a great many others could do. Our predictions are now being verified, and we are content. The time will come when the size

of the Delaware will not be made a serious objection to it. We were anxious that our readers should have some evidence of this, and hence last fall we selected a bunch from the vineyard of Mr. Mace, at Newburgh. The one selected was not the largest in his vineyard, neither was it larger than bunches seen elsewhere; we consider it a fair representative bunch of the Delaware when well grown on matured wood, and expect to see it oftentimes excelled by Mr. Mace and others.

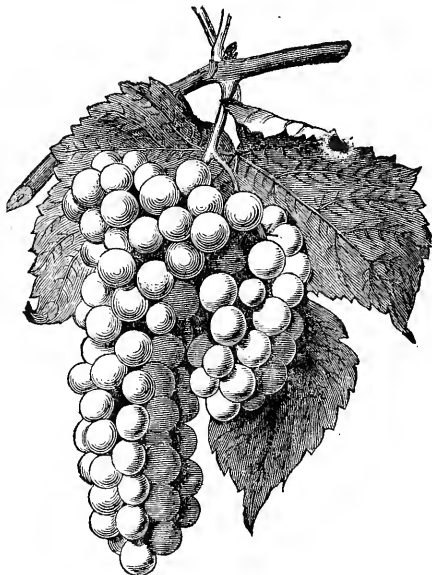
The bunch was placed in the hands of Mr. Tice, a well-known artist of Newburgh. He is distinguished as a painter of fruits, but in this portrait of the Delaware he has excelled all his former works that we have seen. The portrait is faithful in size of berry and bunch, and in every other particular. As a work of art, it is a gem, starting out from the canvas like the luscious fruit itself. Mr. Tice is a master of color. Those who delight in a finished painting in oil, can, in this portrait, have their tastes fully gratified.

Our next effort was directed to its execution on wood. In this we have measurably succeeded. The size and form of berry and bunch are accurately given; but color, play of light and shade, rotundity, are difficult matters to render successfully with printer's ink. We have watched it carefully, altered it repeatedly, and are still doing so at the time of writing. What it will finally be we can not say positively, but we hope the printer will make it what we desire it should be. If it should not prove to be satisfactory, we shall have it done over.

It was found necessary, on account of the size of our page, to curtail the size, and otherwise mar the truthfulness of the foliage, and use the leaf simply as a background; but, in order to give the reader an idea of the true form of the leaf, we have had executed an engraving on a small scale, which is here

given. It is beautifully and truthfully done. The wood and leaf are executed with much spirit, and we think will be much liked.

The Delaware has so often been described that it is not necessary to repeat a descrip-



tion here. Our opinion remains unchanged, that, for the table and for wine, it is the best grape now before the public. Others no doubt will, and we hope may, arise to dispute its supremacy, but we doubt whether it will ever be supplanted.

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## A SHORT TALK ABOUT STRAWBERRIES.

BY H. MORGAN BROWN, RAVENNA, OHIO.

THE beautiful and interesting science of Pomology derives many of its most charming features from the heartfelt and soul-thrilling delight lent by the appearance of our early small fruits, and, unlike the usual manner of supplying our eyes and palates in carefully arranged degrees of improving excellence, munificent Nature at once gives us her *perfection* in the Strawberry.

Who ever heard of a person who was not fond of strawberries? Indeed, tastes most epicurean may here be *perfectly satisfied* in

this most luscious fruit. For the amateur in fruit culture, there is nothing which he may cultivate with so much delight; for the million, nothing which will so satisfactorily reward the slight labor bestowed upon it. The Strawberry ranks preëminent among all small fruits. It is the most promotive of health; the earliest, coming as it does before all other fruits; while its exceeding productiveness, at the same time its remarkable ease of production, renders it of incalculable value to the country.



The greatest impediment to the cultivation of the strawberry has been its *supposed* incapability to resist the severity of our seasons, and particularly the spring frosts. In England, and some parts of Continental Europe, it is treated with the care due only to a hot-house plant, and a crop of fruit expected under no other conditions. But the strawberry is not a tender exotic; but, instead, a plant capable of thriving under more conditions than perhaps any other; for while we find it flourishing in the far northern regions of both continents, in the greatest plenitude, even to the extermination of the native grasses, we may at least give it the character of extreme hardness; and all experienced cultivators will agree with me in saying, that failures in the abundant production of fruit have been due solely to an ignorance of its sexual character. But scientific strawberry growing is now pretty generally understood by the masses of "Uncle Sam's fraternity," particularly by all those who avail themselves of the ready-furnished information supplied by the agricultural and horticultural papers; and the rest—well, here let me say, woe betide that man, who, commencing in operations of this kind, refuses to avail himself of the invaluable aid of a good horticultural paper or magazine. *He* certainly *deserves* failure; and by a *kind* ruling of *intuitive Providence* he will most surely "get it." To all such, I would say, subscribe for the *HORTICULTURIST*, or some other journal of its class; *pay for it*, and *read it*. But be *very* particular to comply with the *second* above request, as *that* will please the Editor, and there is no telling what untold blessings will follow. Then thank your *rising* stars that you live in the age of progress, and that you are growing wiser. But I wander.

With regard to the soil best suited to the strawberry, there is much variance of opinion. In general, any soil which will grow good corn is suitable, with some exceptions. My own observation and experience in the extensive cultivation of this plant, point me most conclusively to the fact, that *unmanured* natural soils, of but moderate fertility, contain the requisite elements for the pro-

duction of the largest amount of fruit of the finest quality. Ground which has been occupied by hoed crops for two or more years after manuring, will be found to serve the purpose nearly as well, if attention is given to thorough tillage before setting, and the same be not *too* much exhausted. But high manuring will never answer in the field culture of the strawberry, and more so with green manure; for in *either* case, the *green* element will be produced in a mass of rampant vegetation, at the *expense*, if not the actual *suppression* of the object sought—the *fruit*. Still, some varieties will be found to differ greatly in their feeding; some requiring more enriching elements than others.

I consider spring planting preferable, and for many good reasons. In planting in the fall of the year, it is necessary to set quite early, which entails much labor in watering and protecting the plants from the burning sun, in order to insure a permanent rooting before winter; and even with all due care, many plants will be lost. By planting in the spring, roots are formed at once, as it is their natural tendency at this season of the year, and the plants will begin to grow immediately. At the close of the following season, the stools will be found to be stouter than those of the previous fall's planting. In either case, the first crop of fruit (if allowed to fruit at all) will be very nearly the same; those planted in March and April producing some fruit in June of the same year.

Plant in straight rows, two and a half feet apart, setting the plants one foot apart in the row. Keep the ground clean of weeds by frequent hoeing, taking care not to disturb the roots, and remove the runners as many as four times after the fruiting season is over. This operation will not be found necessary before the ripening of the fruit, unless the soil be too highly manured; in which case the injunction will be found to be quite unnecessary with some varieties of this berry, as there will be little or no fruit to ripen.

The *common* mode of growing strawber-

ries is to allow the runners to mass together, overrunning the ground; and as, in this case, hoeing is out of the question, the weeds are generally mowed down with the scythe. This I term the *Lazy System*. It brings but a limited amount of small fruit, and consequently but little profit. A vast improvement upon this last will be found in the method of ridging your prepared ground in rows, lightly, by the plow, setting the plants on the apex of this ridge, and filling the spaces between rows deeply with a mulching of spent tan-bark or saw-dust. The after labor will consist only in picking the fruit.

Of the relative value of varieties of strawberries, it is somewhat difficult to speak with accuracy, since the same variety is rarely found of like habit in distant places. A kind may be noticed to be exceedingly productive at one place, while at a distance of a few hundred miles, it will be found quite the opposite in all respects; although it may be equally well fertilized in both cases. This appears to be particularly true of the *Triomphe de Gand*, a variety of great value in the Middle and Western States, while in many places near the Atlantic coast it sustains but a poor reputation. The *Wilson's Albany* is undoubtedly the most profitable variety for extensive planting in the West, as it is by far the most productive of all strawberries. It is but of medium quality, and quite acid until very ripe, when it will compare favorably with the best flavored sorts. It also combines great firmness and weight, which for canning and preserving purposes is indispensable. But *quality* is hardly noticed in the poorly supplied markets of the West, where any thing called strawberry is eagerly sought. The "*Wilson*" is every where enormously productive; yielding at least one-third more fruit than any other well-

tested variety. Of nearly, or quite equal value to the *Wilson* is the *Triomphe de Gand*, which, like the former, is a hermaphrodite, or perfect variety. The *Triomphe de Gand*, although far below the *Wilson* in point of productiveness, quite makes up the deficiency in its magnificent size and appearance, and its exceedingly fine flavor. This last assertion, I know, meets with some opposition; and for reasons before explained in this article. By report, that excellent pomologist, Hovey, lately remarked, that he "would as soon eat a *raw potato* as a *Triomphe de Gand* strawberry." This being so, I have simply to say, that friend Hovey must be EXQUISITELY, ay, DELICIOUSLY fond of raw potatoes.

In a list of new and desirable varieties, I would name, *La Constante*, *Empress Eugenie*, *Lennig's White*, *Surprise*, and *Golden Seeded*; while of the older standard sorts, the *Chili* species, the *Hovey*, *Hooker*, *Welcome*, *Longworth's Prolific*, *Victoria*, *Scarlet Magnate*, and *McAvoy's Superior*, can not well be dispensed with.

[Mr. Brown makes a suggestion once before brought to the reader's notice by a western correspondent; we allude to the field culture of Strawberries on ridges. Where the interval between the ridges is filled up with some light mulch that will not encourage the growth of weeds, there can be no doubt that a great saving of labor will be secured. It has been reported that Mr. Hovey said he would as soon eat a *raw turnip* (not a *potato*) as a *Triomphe de Gand*; but we may doubt whether he made use of such a comparison, since the case does not admit of it. *Trollope's Victoria* is a very good variety to force under glass, but there are few localities where it does well in the open air.—ED.]

## THE LIQUID GRAFTING WAX AGAIN.

BY HORTICOLA.

ABOUT two years ago I communicated to the readers of the *HORTICULTURIST* the method of preparing this very valuable composition. Having used it myself since that time, extensively and exclusively, I can recommend it with the greatest confidence, knowing that nobody will ever use any other wax after having tried this. The peach tree mentioned in my first article, although entirely girdled and deprived of its bark by the goats, so that not a particle of it was left on a space of four inches, has so fully recovered, that it bloomed profusely last spring; the wounds are overgrown by new layers of wood covered with bark, so that the traces of them can hardly be seen.

As the grafting season is approaching, I deem it important to call the attention of your readers to it again, especially the large number of new subscribers, who, of course, have had no opportunity of becoming acquainted with it. I have, besides, found that the quantity of alcohol must be increased. The proportions of the ingredients are as follows:

- 1 Pound of rosin.
- 5 Ounces of alcohol, ninety-five per cent.
- 1 Ounce of beef tallow.
- 1 Tablespoonful of spirits of turpentine.

The rosin is melted over a slow fire. It is then taken from the fire, the beef tallow added, and the whole well stirred with a *perfectly dry* stick, or a piece of wire. When cooled down a little, add the spirits of turpentine, and last the alcohol, in small quantities, stirring the mass constantly. Should the alcohol cool it down too much, so that a lump forms, warm

it a little till it melts again. By adding the alcohol even in small quantities, the water contained in it will cause some effervescence. Keep it in a corked bottle, and lay it on in a very thin coat with a brush. If it is put on too thick, a crust will soon form on the surface, preventing the alcohol from evaporating, and consequently the mass from hardening.

In the recipe given formerly, much less alcohol was added. In a room sufficiently warmed, the wax must be of the consistency of molasses; the quantity of the alcohol may, therefore, be increased according to circumstances. It may be added by pouring it into the mass and stirring when liquid enough; otherwise it must be warmed by putting the bottle in hot or warm water, with the cork removed.

It is always ready for use, and never affected either by heat or cold, healing up all wounds hermetically. E. A. Carriere, in his *Guide pratique du Jardinier multiplicateur*, says: "C'est une très belle découverte, un grand et véritable service rendu à l'horticulture."

[We are obliged to Horticola for calling our readers' attention to this composition again. As one of our correspondents expressed doubts whether a peach tree, barked to the extent described, could be healed over, we take occasion to say, that we saw the tree at the time, and have seen it several times since, and the facts are precisely as stated by Horticola. We again commend this grafting wax as the best thing of the kind that we have seen. We shall note the variation in the quantity of alcohol in making our next bottle. —Ed.]

## ACTION OF FROST ON PLANTS.

BY PETER HENDERSON, JERSEY CITY, N. J.

MR. EDITOR,—A good many years ago I gave my views on this subject to one of our agricultural journals. I was not then a

reader of the *HORTICULTURIST*, nor was I aware of the intelligent class among whom it circulates, or I certainly would have chosen the

better medium for "airing" my peculiar notions on this matter. But it will do no harm to do so once more, particularly as the continued experience of these years has still further tended to strengthen the belief which I have set up for myself in opposition to the great majority of my brethren.

If you ask the question, whether a plant is injured by frost alone, or by alternate freezing and thawing, nineteen gardeners out of twenty will reply, by alternate thawing and freezing.

So if you ask the question of so many weather-wise men, whether the moon's changes influence the weather, nineteen out of twenty will answer, most certainly they do. Yet a German Meteorological Society has just decided, after years of careful investigation, that the moon's changes have no influence whatever on the atmosphere! Now, if the majority of a community be in error—for we are all weather-wise to some extent—may not the majority of a class be in error?

My reasons for entertaining these peculiar notions I can most simply give, by instances occurring in the routine of practice in the vegetable and floral departments of Horticulture, in which I have been engaged for nearly sixteen years, on a scale extensive enough and varied enough to give experiment in this matter abundant scope.

A correct notion of the action of frost on plants is of vast importance, and, if my views are correct, there is no doubt whatever that there is a world of harm done by following the dictum, that the injury is done by thawing and freezing.

The instance that first called my attention to this matter, some fifteen years since, was a span-roofed green-house, facing north and south, (directly wrong, by-the-way) which we, for want of something better, had filled throughout with Stock-gillies. The green-house had no flue, but was tightly fitted with shutters on each side. During a spell of severe weather, when the thermometer marked 10° below zero, we found that the plants had got severely frozen in all parts of the house. On the *south* side the shutters were taken off daily, and the plants on that side were thawed

out, or nearly so, each day, while on the *north* side the shutters were allowed to remain on. The plants remained frozen each succeeding night, adding to the intensity. Shortly mild weather succeeded, which thawed out those on the north side. The result was so marked that I never forgot it. On the south side, where the plants had been thawed out each day, nearly every plant was safe; while on the north, hardly a plant remained alive, after six days' continued freezing.

Again, not quite convinced by this lesson, the succeeding fall, on getting sashes made to cover our cabbage and lettuce, we decided, as a matter of economy, to try a number of shutters in lieu of sashes. Accordingly, we had a range of fifty sashes made parallel to a range covered by fifty shutters. The plants were duly covered by them on the appearance of cold weather, and air given every day, when the weather was mild enough to admit it, by removing the shutters and sashes completely from the plants. But many days occur during winter when this can not be done, when both had to remain on. Those under the sashes were *thawed out by the sun*; those under the shutters were, of course, shaded—remained frozen—only to be still more severely frozen the succeeding night. The result in spring was nearly the same as in the case of the Stock-gillies: those covered by the sashes were as fine as we have ever had them since; those under the shutters, a dead and decaying mass. This was our last attempt at covering cabbage plants with shutters.

Another fact, while on the subject of cabbage plants, will be apparent to many of your readers, who are old country gardeners. It is well known that cabbage plants for spring planting are sown in Britain, in the fall, in the open garden or field, without any protection, and sold in the markets of London, Edinburgh, and Dublin, in the spring, by millions. Yet the winter climate of the British Isles is alternate thawing and freezing. Let us try it here, where we have the ground frozen solid for months, and the result is, that every plant is dead by the opening of spring. I may say I have tried it for a dozen of years

—for we always have thousands of plants left in our seed beds—but they are invariably all gone by spring. It may be argued that it is our severer climate that is the cause of the injury. That may be so to some extent; but I am satisfied that a cabbage plant, and all plants of similar hardihood, will stand a temperature of 10° below zero, provided that the ground can be thawed out in which they are planted, in a day or two succeeding it, as is the case when we have them covered by glass, and admit the action of the sun's rays. The only plants we ever have injured are at the *lower* edge of the frame, where the shading of the board does not allow complete thawing.

The reasons that lead to the popular notions of thawing and freezing, no doubt is in the known fact, that in such winters our crops of grain and grass suffer most; but in this case the cause of the injury is very different; it is in the plants being thrown out of the ground, and the roots being exposed to the action of the frost.

Again, in premature early springs we see instances of plants being injured by “thawing and freezing.” We have often mild spells in March of sufficient duration to *start the sap*; this is succeeded by a temperature a few degrees above zero; the sap vessels are burst, and the plant dies. This is thawing and freezing certainly, but Nature took her spring flight too soon. This does not affect the question at issue, as I contend that, unless the sap was in motion, the injury would not have been done. I once had an experience of this kind connected with which was another of the many “les-

sons” received in the course of practice, and which may be of benefit to some of your younger readers. It has always been our custom to grow our roses in deep pits or cold frames during winter. On one occasion, about the middle of January, while the thermometer stood at zero at noon, we were engaged in removing the roses from the pits to a green-house adjoining. Each lot did not occupy ten minutes in the transition; but the buds had begun slightly to swell: *the sap was in motion*. The consequence of our indiscretion was, that on entering the green-house a day or two after, I found that the whole number—nearly 500 plants—were killed to the pot. The varieties were all hardy climbers. In this case it was want of experience that caused the loss. We knew enough even then not to have taken a rose plant out in full leaf in such a temperature, but we did not know at that day, that exposing a hardy plant, with the sap in motion, ten minutes, at midday, to a zero atmosphere, would be followed by such destruction.

I am afraid I have already trespassed too much on your space, though much more might be advanced in favor of the views I hold. I will be glad to hear from some of your readers who hold the opposite belief.

[This question is as important as it is interesting. Mr. Henderson's closing paragraph, it will be seen, is an invitation for a discussion with those who hold an opposite belief. We hope it will be accepted. We can promise to add some interesting facts that have come under our own observation.—ED.]

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## A HALF DOZEN ANNUALS OF EASY CULTURE.

BY THE EDITOR.

THE culture of annuals has not received the attention they deserve. They have an appropriate place of their own, without infringing in the least on the domain of what are professionally called bedding plants. Annuals, moreover, are so numerous, that selections may be made from them embracing

every thing that is desirable in the way of form, color, and bloom. We wish to make them better known, and at the same time open up to some of our readers a new source of pleasure. We propose, therefore, to give, from time to time, an article on annuals. The sowing season being near at hand, we furnish

a list of six. The directions for culture, &c., must necessarily be brief where so many kinds are noticed at once. Those selected are easily grown, but they are all beautiful.

The seeds of these annuals may be sown in hot-beds, shallow boxes, or pots. The boxes or pots may be set in a hot-bed or in a window, having an aspect any where from south to east. It is out of the question in a single article like this, to treat of several modes of rearing annuals; we shall therefore, in this instance, confine our remarks to rearing them in rooms, for planting out of doors. It is desirable to start many kinds of annuals two or three weeks earlier than it is possible to sow the seed in the open ground; among other reasons, the garden almost immediately puts on its gay attire, and the season is thus in a manner prolonged.

The things needed are as follows: a few shallow pots or boxes, a foot or so square, and some fine light garden soil. The boxes should have in the bottom a hole an inch in diameter, which must be covered with a potsherd. The boxes being shallow, will need no other drainage. In the absence of such boxes or pots, the common flower-pot will do very well, but the former are much the best. The soil should be thoroughly pulverized, and well settled in the boxes, by striking their bottoms a few times on some hard substance. The seeds are to be sown in drills, which are to be from half an inch to two inches apart. The drills can be made by a sharp-pointed stick, or a case knife, or by cutting a narrow edge on a piece of board, the length of the box, this narrow edge to be pressed into the soil. The depth of the drill will vary according to directions. The seed will vegetate sooner if the soil is gently pressed upon them, which may be neatly done by the bottom of a flower pot. The soil should be moderately dry when the seed are sown; when that is done it should be watered. It will help vegetation greatly if the water is quite warm. The water should be applied gently, so as not to disturb the seed. In the case of small seeds sown near or on the surface, it is a good plan to apply the water with a whist broom or a brush. When the seed

are sown, the boxes or pots should be set as near to the window as possible. The best exposure is south, and the next best east. The soil should be watered as soon as it gets a little dry on the top, but it should at no time have so much as to make it sodden. Such other directions as may be needed will be briefly stated as the plants are named. If the seeds are sown during the early part of April, the plants will be of good size to put in the border or beds by the time the weather becomes sufficiently warm. They may be put in small pots singly, or by twos and threes, and placed in a cold frame out of doors, if there is not sufficient room in the house. They should be hardened off gradually, by throwing up the window whenever the weather is warm enough. Towards the end of the month they may be placed out of doors, and a mat or piece of muslin thrown over them at night, if the nights are cool. There will be little danger of frost that can not be warded off in this way. When there is a want of room, the plants may be left in the seed boxes till they can be planted in the border; this, however, only in case of sheer necessity. But we must now proceed with our list, or this article will be too long to be read.

1. Sweet Alyssum, (*Alyssum maritimum*.)—Sow the seed thinly in drills about an inch apart, and an eighth of an inch deep. When about half to an inch high, transplant them into three-inch pots. Three plants may be put in each pot, at equal distances apart, and close to the rim. Alyssum transplants so easily, and forms such a nice mass of roots, that there is no danger of dividing the ball of earth into three parts if the plants are wanted separately in the border, or for edging a bed. Three plants make a good mass for the border. Water the plants, and place them in the shade for a few days, after which they may be put near the glass. The Sweet Alyssum is a modest little plant, bearing all the season a profusion of small white flowers, with a fragrance very much like that of new honey. It is very pretty, and is attractive in the border, singly or in clumps, besides being one of the best of edging plants for beds.

The variegated variety is one of the most beautiful edging plants we have; but it must be grown from cuttings. If we were confined to half-a-dozen annuals, Sweet Alyssum should be one of them.

2. Drummond's Phlox, (*Phlox Drummondii*).—Sow the seed thinly in drills about an inch apart and an eighth of an inch deep. When up about an inch, transplant singly into three-inch pots, or put three plants around the edge of a four-inch pot. Water and shade the same as No. 1. They should not be kept in the house longer than is necessary, since they are liable to mildew. Phlox Drummondii grows from twelve to eighteen inches high. The colors are various. It is, in all respects, a beautiful plant, with flowers of medium size, which are produced abundantly the whole season. It may be put in the border singly, or in clumps of three or four, placed from four to six inches apart. It is one of the best of bedding plants, either for small or large beds. Used in this way, the plants should be put a foot apart. The colors may be mixed or not, according to taste. It is also good for an edging for beds. Like Sweet Alyssum, Phlox Drummondii is indispensable.

3. Ten Week Stock, (*Mathiola annua*).—Sow the same as No. 2. When about an inch high, transplant singly into three-inch pots. Water and shade the same as No. 1. Ten Week Stock grows about a foot high. It produces spikes of handsome double flowers of various colors, lasting a long while. It is very pretty in the border singly or in clumps, the plants being from six to twelve inches apart. It is also a good bedding plant, the plants being placed a foot apart. Unless the seed is very good, some of the plants will produce single flowers. It is, therefore, desirable to reserve a few plants to fill up vacancies that may occur in this way.

4. German Asters, (*var.*)—Sow about a quarter of an inch deep in drills an inch apart, the seed a quarter of an inch apart. When about an inch high, transplant singly into three-inch pots. Water and shade like No. 1. There are numerous varieties of the Aster, growing from four inches to two feet

high. They bloom late in the season. The flowers are double, and of various colors. They vary from half an inch to four inches in diameter. They are divided into distinct classes. The dwarf kinds make very good edging plants. In the border they may be planted singly or in small clumps. The tall-growing kinds should be planted singly. The Aster has been greatly improved of late years, and is now indispensable.

5. Dwarf French Marigold, (*Tagetes patula nana*).—Sow the seed a quarter of an inch deep in drills an inch apart; the seed a quarter of an inch apart. When well out of the seed leaf, transplant singly into three-inch pots. Water and shade like No. 1. The Dwarf Marigold grows from six to twelve inches high. The flowers are mostly brown, and from half an inch to an inch in diameter. It is a neat, pretty, and desirable plant. It should be planted singly in the border. It is also a good bedding plant. When thus used, they should be planted about a foot apart.

6. Balsams, or Lady Slippers, (*Balsamina hortensis*).—Sow in drills two inches apart, placing the seed an inch apart, and three eighths of an inch deep. When fairly out of the seed leaf, transplant singly into four-inch pots. Water and shade as usual, after which place the pots as near as possible to the glass. The Balsam grows from six inches to two feet high. They may now be divided into three classes—dwarf, medium, and tall. The flowers, which should be double, are produced for a long while. The colors are various—white, purple, crimson, blotched, striped, spotted, &c. Some kinds are finely imbricated. They are very beautiful. The Balsam should be planted in the border singly. A few plants should be kept in reserve, to supply the place of such as may produce single flowers. A well grown double Balsam is a beautiful object.

This completes our list for the present. We had made it a dozen, but this article being sufficiently long, we reserve the rest till next month, when the seed may be planted in the border. Those named above are better for being started early. We could, if desirable, make the list three dozen as easily as one.

## RUST ON VERBENAS.

BY MRS. ISAAC CLEMENT, MECHANICSVILLE, N. Y.

IN the February number of the HORTICULTURIST you ask for experience as to the best mode of treating rust on Verbenas. Although not a *large* grower, I can say that, with me, the following mixture has proved effectual, though it may not be the *best*. Mix 5 lbs. of sulphur and a shovelful of lime with 8 gallons of water in a cask, or some deep vessel that you can dip a tall plant in if you wish, without injuring the top. It is best to stand some time before using. The above recipe was copied from some horticultural work some time ago, and furnished, I think, by M. P. Wilder, of Massachusetts, being a solution which he used for mildew on roses; also for the white scale. I thought any thing that would kill mildew without injuring the leaves, might kill this rust. I suppose it is designed to use only the clear liquid, but I stirred up the sediment, and gave them a coating, by inverting on my hand, and dipping up to the pots in the mixture, and let it dry on. This did not improve their looks, however,

but it was a sure cure, both for mildew and rust. The rain soon washed it off the healthy leaves, while the others dried up, and soon all was covered with a new growth. This was done at the time they were set in the ground in May.

[We shall try to remember hereafter to place the ladies on investigating committees. They have a passion for flowers, and are mostly close observers; besides, they are unequalled in the application of remedies, whether to men or flowers. We are obliged to Mrs. Clement for her experience with the rust. The remedy she uses is a good one for mildew. Mr. Henderson's suggestions in our last issue take the form of a preventive, superseding the use of a remedy. It must be borne in mind, that in propagating Verbenas, the mischief is all done before the month of May. The rust attacks the plants in the cutting bed, and destroys them. Are there no others to report on this subject?—ED.]

## REMARKS UPON HARDY PERENNIAL PLANTS.

BY DANIEL BARKER.

BELIEVING that some of the readers of the HORTICULTURIST are somewhat interested about these good old Herbaceous Perennial Plants as ornaments for the flower garden, and are wishing for some information of the various kinds which will bear our winters uninjured, I am induced to offer a few remarks in a familiar style thereon.

*Campanula Carpatia*.—A plant of very elegant growth, producing through the months of June and July a succession of lovely blue flowers. Native of the Carpathian Alps.

*Tradescantia Virginica*.—The purple and white varieties of this plant are seldom without flowers during the spring and summer months, and although quite common,

more especially the purple variety, are well deserving a place in every flower garden.

*Rudbeckia Purpurea*.—A very interesting plant from North Carolina, producing a quantity of its singular tape-like flowers during the summer months.

*Hermerocallis Flava*.—A common but beautiful plant, producing its beautiful lily like flowers in great abundance during the months of May, June, and July. Native of Siberia.

*Cynoglossum Omphaloides*.—A lovely little plant from Spain, producing its small bright blue flowers (in the greatest abundance) during the months of April and May. This plant will require some protection during the winter months north of New York.



*Helleborus Niger*.—A much neglected plant, the harbinger of spring, producing its beautiful rosy white flowers in great profusion as soon as the frost has fairly left the ground. We have had this beautiful plant in great perfection during the month of April, by covering the crowns, during the fall, with oak leaves, removing them as early as the frost in spring disappears, and placing a stand or large bell-glass over them.

*Lathyrus Tuberosus*.—In Germany this plant is not very pleasing to the husbandman, as its running roots render its extirpation very difficult. This side the water it is not as much inclined to ramble, and affords a very beautiful appearance during the summer months. We think it much more beautiful than the species called Everlasting Pea.

*Tussilago Alpina*.—We love the foliage of this interesting plant, which much resembles the leaves of the most beautiful scarlet Geranium; then its pretty erect stem, crowned with its thread-like tissues of lilac, renders it a very interesting and beautiful plant. Native of the Alps of Europe.

*Centaurea Montana*.—Another beautiful Alpine plant, producing its beautiful bright blue flowers abundantly during the summer.

*Epilobium Angustissimum*.—Yet another favorite from the Alpine heights of Europe, producing an abundance of bright purple blossoms in July, August, and September.

*Hepaticus, Vars.*—Greet us in spring with their lively purple, rose-white, and blue flowers—"natives," it is true, but none the less beautiful. We love them for their own sakes, and esteem them as among the most beautiful of our beautiful native plants.

*Iris Pumila*.—A plant of humble growth, but those beautiful flowers of purple, blue, yellow, and white rising a little above the earth to greet us in early spring, what lovely objects they appear to us, as a loved one now removed from us, when admiring them, would involuntarily exclaim, Yes, they are indeed beautiful, messengers sent from God to smooth life's rugged way. We believe it, and pity the man that can not love them.

*Rubus Arcticus*.—A most interesting plant from Lapland. The immortal Linnæus de-

rived much benefit from the wine made from the fruit of this plant, during his laborious Lapland journeys. In Sweden a very good sirup and jelly are made from its berries. The flowers are a beautiful bright pink.

*Dodecatheon Media*.—The American Cowslip. This beautiful native plant was first noticed by Miller in the garden of Dr. Compton of London, England, to whom it had been sent from this country about the year 1709. This beautiful plant produces its pretty pendant lilac and white flowers during the month of May.

*Ononis Natrix*.—A very old but beautiful plant, cultivated in the days of Miller. The flowers are pea-shaped, yellow and orange. This plant will require protecting throughout the Eastern and Middle States.

*Daphne Cneorum*.—This elegant plant grows and flowers, in the greatest abundance, on the mountains about Vienna, and is, without any exception, one of the most lovely of perennial plants. We have not cultivated this plant in this country, (ourselves,) consequently can not say if it will stand the rigor of our winters. We were pleased to see a fine large specimen at the horticultural establishment of Mr. Miller, Broadway, New York, in most luxuriant health, but did not learn from Mr. Miller whether it was taken from the open ground or green-house. We hope it may prove hardy in this country, as it is one of the most beautiful of all perennial plants, and one that no garden will be complete without.

The above are only a few from the many that might be noticed. I would recommend them as suitable for those who may have room for a few only, and who may not feel inclined to purchase new kinds of plants at a high cost.

[Our readers will thank Mr. Barker for calling their attention to these old, but still most desirable border plants. The *Daphne cneorum* we have several times alluded to as one of the most beautiful of border plants. It is hardy about New York, but how much farther north we do not know. It is a good plant also for the green-house. We again commend it most emphatically.—Ed.]

## INTERIOR VIEW OF THE "BRIGHT NUT" EXTENDED.

LEAF-MOULD, MUCK, AND CHARCOAL IN VINE BORDERS.

BY FOX MEADOW.

"THE only question of interest to the public, in our recent discussion with 'Fox Meadow,' " says our friend Bright, "on the subject of Leaf-Mould, Muck, and Charcoal in Vine Borders, is this, Is there danger in the use of such materials?" "Fox Meadow dodges the issue." Now we can assure our friend Bright that there is not a single component used in our material organism, ponderable or imponderable, known by the name of "dodge."

Is there *danger* in the use of Leaf-Mould, Muck, and Charcoal? What an important question this becomes, Mr. Editor, when that little noun "danger" steps in. A question more vast and important than this, never affected man's material existence! And we are only sorry, sir, that the answering of such a question has not fallen into abler hands—the man of collegiate education, the man conversant with the crucible. In answering this question, we shall base our remarks on our own personal experience; for we have invariably found it to be a much better plan than to pin ourselves on the sleeves of others living and writing in different parts of the world. We shall not occupy space in this journal to show the ridiculousness of Mr. Bright trying to prove our advocacy of the use of *large quantities* of Leaf-Mould or Muck in Vine Borders, for your readers, if they will not willingly have "coal dust" thrown in their eyes, will read, again and again, if needs be, what we have said.

If there is danger in Leaf-Mould, *if* there is danger in Muck, *if* there is danger in Charcoal and the general use of these materials, *then* it becomes a solemn question, not merely for the cultivator of "exotic grapes," but for the agriculturist; and not the agriculturist alone, but a question of *vital interest to the whole family of the human race!* Let us look abroad over the face of the earth, and see what means the Creator

of the Universe has instituted to supply man with the necessary food of life, and we shall find that the forest trees drop their foliage to the ground, and it becomes a mass of vegetable mould, oftentimes from twelve to eighteen inches in thickness, and as old age creeps over them, their branches, and lastly their mammoth trunks, drop bit by bit in rotten sticks to mother earth; yet no man ever saw a forest of "mushrooms" spring up out of this leaf-mould and rotten sticks! But what do we see? We see the farmer in this country, from the far East to the Rio Grande, in search of this very leaf-mould; he cuts down the forest, and then plows between its stumps, or drags them by force from the ground to plow and sow; but who ever heard of a farmer reaping a crop of "toad-stools?" But what have we heard, and what have we seen? We have seen the farmer exhaust the soil of this leaf-mould; plow and sub-soil till he has extracted every particle of it from the ground, and then travel West, or somewhere else, to practice the same nefarious system! The question to-day, Mr. Editor, for the horticultural and agri-cultural world, is not of the "injurious" effects of leaf-mould, but how is man to reproduce it in the earth from whence, through ignorance or avariciousness, it has been taken out by his crops?

This same practice of robbing the soil of its vegetable mould is not confined to this country alone; we read of it all over the world to a greater or less extent. In Lower Germany, west of the Vistula, in Spain and France, this vegetable mould is nearly exhausted, and, like much of the land in these Eastern States, nothing is done to prevent ultimate sterility; and it appears to our mind clear that no efforts of man will be able to return this vegetable mould without allowing Nature to accomplish it by another growth of forest trees. Watch the farmers selling their old, exhausted lands, and gladly

fleeing to rich forest or black leaf-mould prairies, and ask, "Is leaf-mould injurious?" Go ask Liebig, Voelcker, those champions of "special *mineral* manures," to return to their own sterile silicious sand, from the Vistula to the German Ocean, the primitive condition of that soil!

We also invite the devotees to "special fertilizers" here in this country to try their much vaunted mineral, and all forms of "elements of the food of plants," on the barren lands robbed of their leaf-mould, and see if they can be returned to their original condition! Liebig, because he discovered a very small portion of minerals in the constituents of plants, (merely enough to give strength and firmness to the organism,) ignored the importance of vegetable mould, the prepared food of Nature for all the higher orders of the vegetable world, and seems to think that "inorganics" is the one thing needful, and seems to recognize nothing else as necessary, when it is a well-known fact, that *it is owing to the carbonic acid given out by the vegetable mould, and mixing with the water supply, that the water is enabled to dissolve the minerals and convey them to the spongioles of the plant.* Now what is the gist of the experiments of Liebig intended for practically? It is simply this, to add such constituents to a barren soil as it is in need of; to supply a plant with nourishment from an early stage of growth to full developed luxuriance, enabling it, in ratio to its strength and size of foliage, to extract a large amount of carbon, ammonia, etc., from the atmosphere, and thus obtain a large size, so that, when ultimately it goes to the manure heap, or is plowed into the land, *it shall increase the vegetable mould.*

Now if Liebig, by the use of his "inorganics" or "mineral constituents," can succeed in raising large crops, and the application of these special manures be repeatedly applied to lands almost destitute of vegetable mould, no person, we think, can be so blind as not to see the ultimate barrenness of such land, and the total destitution of all its carbonaceous matter.

Now let us examine for a moment the result of our own experiments with what are termed "special manures." The farmers of this country find that, by their constant application, their lands become less productive, what they term "worn out." Corn has been grown by the aid of "specials" till the ground will grow corn no more, and still many of them, at the present time, are as blind as bats to the real cause; and when one "special" fails they try another; and when this fails, they cry out, "It is worthless;" and some of the more intelligent will say, "[It is not adapted to *our* land," when the true secret to the whole lies in the fact, that, owing to the almost utter destitution of leaf-mould, or vegetable mould, in the soil, there is not a sufficiency of carbonic acid produced to combine with water to dissolve the mineral constituents contained in these special fertilizers. This is not all, by any means; for many of these "specials," (warranted to contain the "body and soul" of fruits and trees, including all the various cerealia, alliaceous, brassicaceous, leguminous, acetariaceous, and oleraceous plants,) compounded as they are, when either in the soil, or applied as top dressing, and subjected to the influence of the atmosphere, become a crystallized mass of rubbish, almost insoluble in either earth or water. This process of crystallization is probably effected by the refrigerative power of the soil, or atmospheric heat causing evaporation; and whenever such "special fertilizers" as these are applied to soils, let the carbonic acid from vegetable mould be ever so great, it has no more effect upon it in dissolving or disintegrating the particles, than it would have upon a piece of an old glass bottle. Go on, farmers, as usual; grow large crops of hay and corn, and carry then to the markets; there deposit your rich loads of leaf-mould, and bring back to your farms some "special," the mercantile value of which will be one-third the value of that carted away. This is farming to the very essence of perfection; and if persisted in for many years, with a rapidly increasing population, the consequences will be ominous.

The great question of the agriculturist in many parts of Europe, is, how to produce large quantities of vegetable growth in order to supply their lands with a greater depth of vegetable mould? In this country, the great question seems to be, "how to produce large crops for *market* without returning one ounce of the carbonaceous matter produced back to the hungry, dying soil?" With the evidence of all these facts staring us unmercifully in the face, we are asked, "Is there *danger* in the use of leaf-mould?" We emphatically say, No.

But without its use there is danger, and not only danger, but ruin, and total annihilation. What, pray, shall we grow vines and grapes with? the same as the farmers grow *their* crops with, "special fertilizers?" Why not affirm at once that vines need no carbonaceous matter; that you have discovered *glands* in the organization of the vine adapted identically for the absorption of "tartaric acid," phosphates, lime, soda, and potash! We may just as well affirm that a son of the "Emerald Isle," brought up from childhood there, to the ripe old age of "three score years and ten," fed principally all his life on potatoes, would be destitute of hard bone, sinew, flesh, and fat, and that his chemical constituents would be all *starch*!

Our friend Bright calls our attention to "Brown's American Muck Book," (we wish he would call our attention to a little more of his *own* experience,) to show us what Muck is composed of, as if we did not know that it contained "Dead leaves, rotten trunks, and the branches and seeds of trees," and for this reason we recommend its use, and use it ourselves. "The acidity of Muck," he says, "is often so great, that stones taken from boggy land have every trace of matter that acid can attack, dissolved; in a piece

of *granite*, for instance, the mica and felspar have disappeared, and there will only be left a silicious skeleton of a stone!" This shows us the wonderful provision in Nature to attain certain ends, the proper formation of soil suitable to the growth of plants. These immense swamps, composed nearly wholly of vegetable matter, are in themselves wholly unfit for the general growth of plants, through the lack of mineral agency, and a wise provision by acids for the decomposition of all such minerals as form the constituents of soil. But to suppose that these acids, which are deleterious, exist in muck after becoming subjected to the action of the atmosphere by freezing, is purely absurd. These acids are thrown off as soon as the muck is once thoroughly frozen, thawed, and become partially dry. A chemical action at once takes place, the acids are transformed, and the carbonaceous matter becomes the recipient, attractor, and absorber of carbonic acid and ammonia; this carbonic acid, when ingrafted with poor soils, enters water and dissolves mineral substances, and the ammonia this muck contains becomes absorbed by the common earth. This muck also *darkens* the ground, therefore attracts heat, and increases its power of absorbing atmospheric gases. Being also decomposed with the *partial* exclusion of the air, much of its real carbon remains to serve the purpose of charcoal, and "sulphuret of iron" compounds *are not generated* (quite immaterial if it was, *if the muck be subjected to the action of atmospheric or an alkaline influence in the form of potash, etc.*)

[We regret that we are compelled, for want of room, to divide this article; but our "Table" matter is already much reduced in quantity.—ED.]

*To be continued.*

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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SEEDS RECEIVED.—Mr. Dreer, of Philadelphia, will please accept our thanks for a parcel of choice seed, highly prized. Mr. Bridgeman, of New York, will also please accept our thanks for a collection of choice seed, which fill a big "aching void." These gentlemen will have the satisfaction of knowing that they have strewn our path, if not with roses, at least with flowers.

and bushy, and therefore good for bedding. It is a seedling from Beauty of the Boudoir, but the new growth more nearly resembles Voltairianum; it is, however, much superior to either. It is the best Heliotrope that we have seen.

FUCHSIA METEOR.—This new Fuchsia, we see, is advertised by Mr. Henderson. We were so fortunate as to have a plant of it last season. It is very pretty, and may take its place among ornamental leaved plants. It has a compact habit, and does very well in a shady border, where its unique foliage is very attractive. The leaves are of a deep golden yellow, heavily marked with reddish brown along the middle and lower part of the leaf. It is a very striking and beautiful plant.

A GOOD ROOT CUTTER.—We lately had the satisfaction of seeing, at R. L. Allen's warehouse, a new root cutter, which more nearly realized our ideas than any thing we have yet seen. It will cut either fine or large, according as the motion is reversed. Like a good rule, it works both ways. The price is moderate for a machine of its capacity. We have made rude attempts at root cutters, knowing their great value; but we give it up after seeing this.

COMSTOCK'S ROTARY SPADER.—Such is the title of a pamphlet just received. We have already expressed a very favorable opinion of this digger, after having seen it in operation. We are glad to learn that Mr. Comstock has now brought it before the public. It is a most valuable invention, and destined,

THE ASPARAGUS BEETLE.—C. Marié, Esq., of Tubby Hook, has brought us a box of this beetle just as we are going to press. The fact is so important, that we can not pass it over till next month. He accidentally discovered these beetles in large numbers concealed among the moss and under the bark of some trees near his Asparagus bed. They were dormant at the time, but became lively enough on being taken into the house. These beetles, therefore, pass the winter in a perfect state, ready to begin their depredations on the first start of vegetation. Mr. Marié, of course, began war upon them while he had them in mass; and our object in this brief note is to advise our readers to go and do likewise, and without delay.

A NEW HELIOTROPE.—Mr. Cranstoun, of Hoboken, last season brought us some seedling Heliotropes, one of which, named Chieftain, was so fine, that we advised him to send it out. This, we are glad to know, he has now done, as he should have done with other fine things that he has raised. Chieftain bears a truss of remarkable size, of a deep blue color, and great fragrance. The habit is decidedly good, being compact

we think, to take its place by the side of the reapers and mowers. If we had one, we should consider plowing a pleasant pastime.

NEWBURGH BAY HORTICULTURAL SOCIETY.—At the annual meeting of this enterprising young society, the following officers were elected for 1863: *President*, H. W. Sargent. *Vice-Presidents*, R. Sterling, T. B. Shelton. *Treasurer*, Alfred Post. *Recording Secretary*, E. W. Gray. *Corresponding Secretary*, J. F. Van Nort. *Executive Committee*, D. Smith, J. H. Chapman, Charles Dubois, O. S. Hathaway, W. D. Barnes, E. Carter, L. W. Gardiner, H. Cornell, William A. Woodward, T. H. Roe.

#### CATALOGUES, &c.

*Dexter Snow*, Chicopee, Mass.—Ninth Annual Catalogue of choice Verbenas, Dahlias, Roses, Geraniums, Fuchias, Heliotropes, Pinks, &c.

*Joshua Pierce*, Washington, D. C.—Circular of Small Fruits.

*Frost & Co.*, Genesee Valley Nurseries, Rochester, N. Y.—Wholesale Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, Bulbs, &c., for the spring of 1863.

*Proceedings of the American Pomological Society*.—Received too late for notice in this number.

*Andrew Bridgeman*, 878 Broadway, New York.—Descriptive Catalogue of choice French Hybrid Gladioli.

*William Brocksbank*, Prospect Hill Nursery, Hudson, Columbia County, N. Y.—Catalogue of Fruits, Trees, &c.

*John W. Adams*, Portland, Maine.—Wholesale List of Hardy Evergreen Trees, &c.

*E. Ware Sylvester*, Lyons, N. Y.—Wholesale Catalogue of the Lyons Nurseries for the spring of 1863.

*David D. Buchanan*, Reid's Nurseries, Elizabeth, N. J.—Catalogue for 1863 of Fruit and Ornamental Trees, Flowering Shrubs, &c.

*B. K. Bliss*, Springfield, Mass.—Spring Catalogue and Amateur's Guide to the Flower and Kitchen Garden, containing a descriptive list of nearly two thousand varieties of Flower and Vegetable Seeds, &c.

*John C. Teas*, Raysville, Henry County, Ind.—Wholesale Prices of Fruit and Ornamental Trees, Shrubs, Vines, Plants, &c.

*Saxton's Hand Book on Tobacco Culture*.—Notice next month.

*McElwain Brothers*, Springfield, Mass.—Descriptive List of Superior Vegetable and Agricultural Seeds. Also a large and complete collection of Flower Seeds.

## CORRESPONDENCE.

MR. EDITOR,—I thank you for the very interesting information communicated in reply to my inquiry of 4th ult. I should have mentioned therein, that I preferred a list of such grapes as were best adapted to *market* purposes, and I trust that you will furnish such a list to the extent of 160 vines in your April number. With the aid of the list already given, I shall take good care that my own table does not suffer for want of a full assortment of the best varieties.

In my system of training, it is my purpose to conform strictly to your recommendations in the "Grape Hints," now appearing in the HORTICULTURIST. Any suggestions, there-

fore, which, *in view of this*, you may be pleased to offer in regard to the distances of the vines in the rows, or other matters pertaining to the subject, will be very acceptable to a subscriber in BALTIMORE.

Baltimore, 5th March, 1863.

[For market purposes, in your latitude, we should plant as follows: Delaware, 80; Diana, 40; Creveling, 20; Concord, 20; total, 160. Delaware, Rebecca, and similar compact growing kinds, we should plant four by six feet, the latter being the distance of the rows. Diana, Creveling, Concord, &c., six by six. The trellis should be six feet high; not more. We shall always be glad to give

you any information in our power. The above is rather briefer than we could wish, but we are very much pressed for room just at this moment.—Ed.]

MR. MEAD,—*Dear Sir*:—You say that the best roots of a Grape Vine are within six to four inches of the surface of the ground, or four to six inches beneath the surface. Now will you tell me, in the March or April number of the *HORTICULTURIST*, if good success may be expected, in producing grapes, if *all* the roots are within one to six inches of the surface. My soil is six inches of sod, made by the dropping of the leaves, from the bushes now standing. Under this sod is a coarse sand, quite pure. My vines, (Delawares,) so far, are set in this leaf mould, and mulched with six inches of salt hay. Shall I succeed with this depth of soil (no more) and this mulching, which I intend to replenish as it decays, and to top dress with stable manure, when the vines begin to fruit? The sand does not leach like gravel. I know this, by the color of the sand in a barn yard where cattle have been, more or less, for a dozen years. Do not fear to say that I shall not do any thing, if you think so.

I propose to set a thousand strawberry plants this spring, in soil as described above, with the same or less mulching. Will you give me your opinion of the Bartlett for one variety? I shall plant *Triomphe de Gand* for the other. Believe me,

Very truly yours, —

Feb. 17th, 1863.

[We have no doubt at all that you will meet with a good degree of success with your soil. In locating a vineyard, we usually look about for the lightest soil we can find. To this we add muck, according to circumstances. You have six inches of leaf mould resting upon sand. You could very safely have mixed a few inches of the subsoil with this mould. As it is, you can gradually increase the depth of your soil. The Delaware needs higher feeding than many other grapes; you should therefore

mix some manure with your mulch, which will cause it to rot sooner. This mulch will have the effect of keeping the roots nearer than four inches to the surface, and therefore should not be removed, but be allowed to decay on the surface. Three or four inches of mulch are quite as much as we should venture to use at a time. We should use it pretty freely in the stalls and barnyard, and thus be able to apply it partly decayed, and fully saturated with liquid manure. The only fear we have in your case is, that you will carry mulching too far. As much as possible, use your salt hay around the barn, and compost it with headlands, road sweepings, leaves, manure, &c., and use the whole as a top dressing for your vineyard. In this way we can promise you a very great measure of success. Do not forget to use top dressings of lime, ashes, &c., at times.—In regard to the Bartlett, it is a fine flavored and valuable fruit, when well cultivated. If you have ever seen the Boston Pine, you know pretty well what the Bartlett is. They are wonderfully alike. The Boston Pine we have always esteemed one of the best Strawberries in cultivation.—Ed.]

HEADQUARTERS, 3D BRIGADE, 3D DIVI-  
SION, 6TH CORPS, *Camp near "White  
Oak Church,"* Feb. 3, 1863. }

MR. PETER B. MEAD,—*Dear Sir*:—Although I have for a time quitted the service of Pomona for that of Mars, I yet much prefer the former, and look back to the many happy hours spent in study, meditation, and work. The hope often enters my mind that I may yet return to my home to rejoin the army of peace, but not till this horrid work is over, and thoroughly done, if I should keep my health.

I very much miss the pleasant monthly visits of your *Journal*, especially now that we are "froze up," and "all is *quiet* on the Rappahannock." My mind, recurring to you and to my former favorite pursuit, naturally stumbled on my hobby, *Native Grape Culture*. I thought of an experiment I made last spring in *root grafting the grape*.

Early in the spring of 1861 there appeared in the *Rural New Yorker* a short article on root grafting the grape. The experiment was on only three grafts. All succeeded. I showed it to a prominent nurseryman, who said, "F—, I am sorry to see it, but it is true; you are too theoretical. All that root grafting experiment is nonsense. Grapes can not be grown profitably. The Isabella is as good as any of the new-fangled kinds with attractive names. The vine needs little or no pruning. The renewal system is a curse; too much theory, too much theory."

Nothing daunted, I tried the experiment; but being compelled to absent myself for a few weeks, I left it in care of one who held the same contempt for *theory* as my employer. It failed, of *course*. "Try again, when the first is not a fair trial," is one of my mottoes. So, in the spring of '62 I at it again. Having purchased some large Hartford vines, near planting time, whose roots were considerably mangled, I cut off all that would be injurious to the plants; cut them into pieces about four inches long, being very careful to keep the lower ends all one way, tied in small bundles, and packed in damp sand. In a few days I had my hot bed made. I covered the manure with seven inches of street scrapings, which had been exposed to the weather one year. My scions were of several varieties, in most cases with the eye rubbed out, having been cut from very indifferent purchased plants. But I thought I could but fail. I would try to succeed. I cut my scions so as to leave but about an inch of wood below the eye, or where the eye should have been. These I grafted in the usual method of tongue grafting, keeping the splice together by winding two or three times round with woolen yarn, and tying. I had to be very careful not to get the roots upside down, as they had no fibers. I planted these in my hot bed, placing them in rows three inches apart, and but two inches or less in the row, the eye level, or *slightly* covered with the surface. The hot bed did not seem to have any heat in it; but in a few days

they started to grow; that is, a fair proportion under the adverse circumstances, say sixty per cent., although I am not positive, not having my "Record of Experiments" here. In a few weeks, when from one to four inches high, I very carefully transplanted them to nursery rows. The best had roots over six inches long, the poorest none at all. Transplanting was a tedious job, which killed about ten per cent. By September 1st, the best Hartford had grown nearly three feet; the poorest of the poor growing kinds had not made more than a few inches. Some of the scions, and also of the roots, were not thicker than straws. The heavier the scion and root, the sooner and better they grew. I tried some good scions on the same roots, planting them directly in the open ground. They all failed. I do not think any heat was supplied by the manure in the bed, and would not be afraid to try in a well prepared cold frame. Put two grafts in a pot, and put the pots in the cold frame. You will see the advantage of pots when you come to transplant. I am aware that many New York nurserymen raise grape vines exclusively by this method, in houses heated by hot water, but I never saw any description of the process in the journals. Vitis.

[It is one of the redeeming traits of this unhappy war, that it has not had the effect of obliterating from the minds of those actively engaged in it, the love of those peaceful pursuits to which they were formerly devoted. This is a most hopeful sign; for it warrants the belief, that when the war is ended, the men of our armies will quickly resume their ordinary pursuits, and soon restore the country to its former prosperity. May you and all your companions speedily rejoin the army of peace.—The method of root grafting described by you is more or less common among nurserymen here. You would succeed in a cold frame, but not so well as in a warm one; for in the last you would have bottom heat as well as moisture, which greatly promotes success. We hope to hear from you again soon.—Ed.]



THE

# HORTICULTURIST.

VOL. XVIII.....MAY, 1863.....NO. CCIII.

## Hints on Grape Culture.—X XV.

IN our last we promised to illustrate in detail the process of forming the spurs in the system of training under discussion. This we now proceed to do. The engravings are on a moderately large scale, being about half the natural size; sufficiently large to give the reader a clear idea of each stage of the process. We have prepared the illustrations with much care, and they are admirably executed; a mere novice will be able to recognize them as grape vines, and not mistake them for apples, pears, or plums. Almost the only defect in our last illustration consisted in the failure of the engraver to truly represent the bark of the vine. We are now in a position to have these things well done hereafter. The illustrations which follow are not mere fancy sketches, but actual portraits taken from the living vine by our own hands.

To make the subject as plain as possible, we propose to go back to the arm as laid down at the beginning of the third year.



FIG. 1.

*Fig. 1* is a section of a single bud. The arm, when first laid down, was composed

of buds just like this. The pinching and stopping developed the buds finely, as shown at *b*. The attachment of the leaf and the swelling caused by the tendril are plainly seen. The letters *a* and *c* are of no importance just now, but will be hereafter, when we come to speak of propagating the vine.

*Fig. 2* shows the appearance of the spur

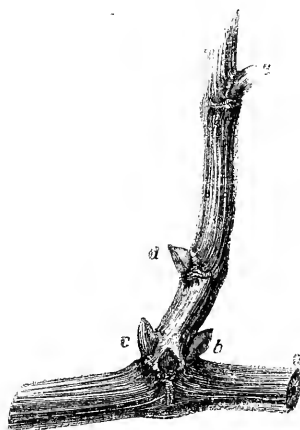


FIG. 2.

at the end of the third year, as pruned. The cane from which this spur is formed proceeded from the bud *b* in *Fig. 1*. The effect of pinching and stopping is also seen here in well-developed buds. After being pruned as shown in the figure, the treat-

ment will consist as follows: at the season of growth, the buds *d* and *b*, and, indeed, all the buds except *e* and *c*, are rubbed off. Others buds will sometimes be developed at these points, but they must be rubbed off, and only *e* and *c* allowed to grow. The bud *c* is retained in preference to *b* and others, because it is on the side opposite the inclination of the spur, and is usually the strongest. The rule, however, is to select the strongest base bud, if it is not badly placed; rubbing the others off will strengthen the one that is left. If by any accident the base buds should be destroyed, the bud *d* must be retained. The shoot from the bud *e* is the only one allowed to bear fruit, the full strength of the shoot from the lower bud being retained for fruit the next year, as already explained. The minutæ of pinching, etc., the reader already understands.

*Fig. 3* shows the appearance of the spur at

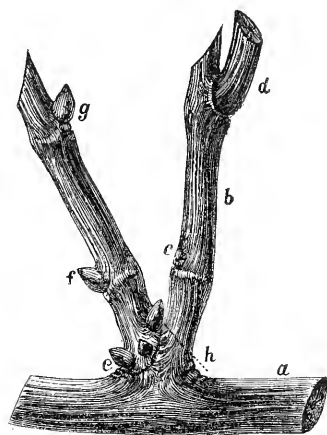


FIG. 3.

the end of the fourth year, partly pruned. The right hand spur, *b*, is the one shown in *Fig. 2*. *d* is the shoot that proceeded from the bud *e*, and bore the fruit. *c* shows where the bud was rubbed off. The left hand spur is formed of the shoot that proceeded from the base bud *c* in *Fig. 2*. The pruning is completed by cutting off the right hand spur, *b*, at the dotted line, *h*, *Fig. 3*. The treatment will then be as follows: the bud *g* is to be

retained for fruit; but if it should be accidentally lost, retain *f* for fruit; otherwise rub *f* off. If the base bud, *e*, should be well developed, retain it now in preference to the others, because it is situated lower, and the base spur will be kept from elongating too fast. If it is weak, however, take the upper base bud. All the other buds are to be rubbed off. We shall then have two shoots, as before, and the same process of pruning is to be pursued year after year. In this manner the base spurs or knobs are kept quite as short as they are by what is called "short spur" pruning, with this advantage, that the native vigor of the vine is not half as much impaired.

We have spoken of the accidental loss of the base buds. If the vine is in good vigor, these may usually be reproduced again by cutting down the spur within an inch of the arm. We here present some examples, being actual portraits. *Fig. 4* represents a case in

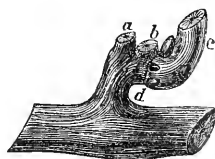


FIG. 4.

which the base bud was lost. The next bud above (say *d* in *Fig. 2*) was allowed to grow. *a* shows the little stump left by the next pruning, which was close, only the base bud being left to grow. The shoot produced by this base bud is shown at *b*, as pruned, the pruning in this case also being short. The base bud from *b* produced the shoot *c*, and the pruning will now go on as above described. The curve in the shoot *c* has had the effect of developing seven buds around the base, four of which are shown, the majority of them being full and plump.

*Fig. 5* presents a case in which the spur, *a*, was broken off early in the season. Two shoots, *b* and *c*, were produced, and both might have been retained; but *b* showing a decided outward rather than upward tendency, it was cut off. The base buds on *c* are very full and plump. The pruning in this case

will now go on in the usual manner, the spur being like that shown in *Fig. 2*.

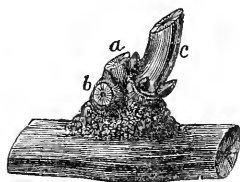


FIG. 5.

*Fig. 6* shows an example of a base spur or knob cut off for the purpose of getting a new fruit spur. *a* shows the point where it was cut. A number of dormant buds were developed, but only two, *b* and *d*, were retained,

the others being weak. *d* being rather badly placed on the side of the arm, it was cut off, and *b* retained. The base buds, *c*, are also

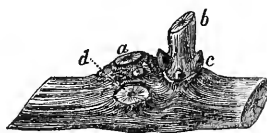


FIG. 6.

in this case nicely developed, and the pruning will go on as usual.

With these examples before the reader, we think we may pause for a moment, in order that he may study them.

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### THE LIBRARY.—III.

BY S. L. B., BROOKDALE FARM, MAINE.

WE now come to books, their arrangement and classification.

In most private libraries, unless the collection is of considerable pretensions, the cases are so constructed that the larger works occupy the lower shelves, gradually decreasing towards the top, the upper shelves being constructed for the smaller sized volumes. By this method, if the collection is small, the library has a symmetry and beauty about it that commends it to the attention of all beholders. The object, or one object, at least, of this plan, is to save room, for a book-case so built will contain a larger number of volumes, than if all the shelves were of equal distances apart. By this method, also, the books must necessarily be arranged according to their size, a good plan enough where the library is not extensive.

A better plan, according to my own idea, is to have the shelves of the cases at very nearly the same distance apart, so that the volumes may be arranged according to a better system of classification than the mere external shape or appearance of the books. It is true, that where books are arranged according to particular subjects or authors'

names, the whole library may not present quite so symmetrical a view to the eye; but an examination of its contents will show a harmony and relation running through the whole collection that will at once silence all objections as to its outward appearance. It may also be said, that such a plan of arranging books is quite unnecessary and inconsistent for private, although a very good one for public libraries. But we answer, that a private library of any considerable extent—and we know of many gentlemen, a number of them country residents, who have libraries of this character—should be arranged with as much system, and kept in as good order as a public one, for the advantages presented by the arrangement are as necessary to the former as the latter.

The arrangement which we would suggest is, that books be classed both according to the subjects, and the authors' names. Let us illustrate: the library is so extensive that separate cases are devoted to particular branches of knowledge; for the intelligent gentleman desires works upon history, biography, and general literature, as well as upon horticulture, rural economy, and other

branches of agriculture. Now the books in these separate cases may be arranged by authors' names. So we get two systems of classification, the one by subjects, the other by the names of the authors. In the case devoted to agriculture proper, for instance, we have the name of FLINT, and we find the volumes of the "Agriculture of Massachusetts," the works on "Grasses" and "Dairy Farming," and also the "Manual of Agriculture," side by side. Again, take THOMAS, and we have the three volumes of "Rural Affairs," "The Fruit Culturist," "Farm Implements," and the volumes of the "Cultivator" upon the same shelf. Perhaps it may not be necessary to commence with A, at a certain place or upon a certain shelf in the library, and continue through the case, reaching the end of the alphabet and the last shelf at the same time, and it may; this we leave to be decided by each reader. By this plan the works of an author are by themselves, whereas, if differently arranged, works by the same author would be in widely different places in the library, because upon somewhat different subjects.

We have indicated in the above remarks such a method of classifying books as can be readily adopted in most private libraries; yet there are many collections throughout our land that are not of the extent that would demand such an arrangement. A neat book case containing a few choice, well-selected volumes of general literature; a few standard works upon the different branches of rural art, science, and economy; and the leading journals devoted to agricultural and horticultural matters, would form one of the most attractive pieces of cottage furniture, and would pay a greater dividend upon the capital invested, than bank stock. And we are glad that such libraries are springing up all about us. Many farmers and gardeners not only take the prominent rural journals, and bind up the yearly volumes, but they have Downing's works, and quite a respectable number of standard volumes upon that branch of culture or husbandry in which they are specially interested. The growing interest in agricultural

and horticultural pursuits that has taken place within the past twenty years, and the advancement that has been made in them, are due in a great degree to these agencies.

There are many country residents, who, if they do not already possess a large library, have the means of procuring it "to order." But a good library, a really valuable collection, can best be obtained by slowly and gradually building it up from the materials with which a person is constantly surrounded. It can then be built up according to the wants and tastes of the possessor. There is no better employment for the spare time, and no better use for the spare funds of a young man than the foundation of a good library of useful books. They accumulate year after year, not in such large numbers but what he can make himself master of their contents, and in a few years he will find that he not only has a respectable collection of books, but has their wisdom at his own command. But young farmers and gardeners should not fall into the error of obtaining this knowledge and retaining it, but to be useful to themselves or others, it must be put into the active and real affairs of practical life.

[We welcome No. 3 of the Library series with much pleasure. Every one of our readers should, and probably does, feel an interest in this subject. We hope there are few of them who have yet to learn what an inestimable treasure a good library is. We are very glad that the subject has fallen into the hands of S. L. B., for he understands the subject, and fully appreciates its importance. There is an additional reason why large books are placed on the lower shelves; the labor of handling them is thereby much lessened. The arrangement by authors and that by subjects are both good, the first suiting us best; either is much to be preferred to the too common practice of putting books upon shelves without regard to any arrangement at all, except size. In the excellent advice given by S. L. B., it should not be overlooked that books are to be *read*, not kept for show.—ED.]

## VENTILATING AND PROTECTING FENCE.

BY SENECA, WATERLOO, N. Y.

INCLOSED I send you my plan of a ventilating fence, for gardens and small vineyards, such a one as I built for myself last fall. I have therefore not had time to try its utility and usefulness, but have no doubt it will work well, and prove a good wind-breaker and shelter for vines and fruit trees in the spring, at the same time hastening them forward, and, I think, will ripen grapes ten days earlier than without it. When the cold, piercing, blasting winds of May and June are over, open the ventilators, and the fence makes no more shade than a common garden fence. It is cheap and simple in construction, and can be made any desired height that is required. Do not laugh at my rude drawings, as I am no draughtsman, but hope to make myself intelligible to you. The fence is  $6\frac{1}{2}$  feet high, made of one 6 inch and six 12 inch boards. The posts are 10 feet long, 4 by 6 at butt, 6 by 2 at top, of chestnut timber. I charred the butts 4 feet, and then applied gas tar, put on with a whitewash brush, hot, and while the posts were still hot. Figure 1

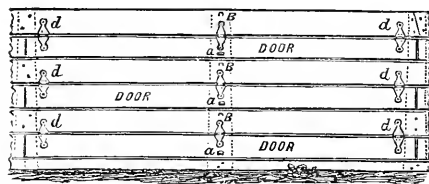


FIG. 1.

is a front view, representing the fence when shut. *d* are strap hinges; *a* is a mortice  $1\frac{1}{2}$  inches long in the ventilator, passing or admitting a staple driven in the post, to keep the ventilator closed, every alternate board

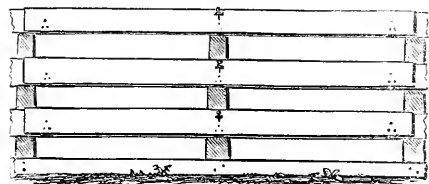


FIG. 2.

being a ventilator; *B* is another staple,

which corresponds with the mortice in the ventilator, to keep it open when required, and fastened by a wooden pin passing through the staple. Figure 2 is the fence when the ventilators are open; *e* representing pins and staples to keep the ventilators in their places. Figure 3 is a side view.

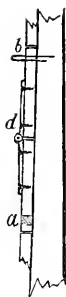


FIG. 3.

*Items for Ventilating and Protecting Fence.*

One length, 16 feet long and 7 feet high,	
3 posts, 4 by 6 butt, 2 by 6 top, 10 feet	
long, 54 feet, at \$2 00 per 100 feet,	\$1 08
112 feet pine boards at \$1 25 per 100	
feet,	1 40
6 dozen screws, at 50 cts. per gross,	24
$4\frac{1}{2}$ pair hinges, 5 inch strap, at 10 cts.,	45
6 staples at 2 cents, 12d nails, 3 cts.,	15
	<hr/>
	\$3 32

Should you ever come this way, I would be pleased to have you stop in; and if I do not show you a model vineyard, I will agree to stand treat to all the oysters and other good things until you say quit.

[We are much obliged to you for your plans, with the accompanying description. We have reduced them in size, and put them in such shape as we think will suit you. That some kind of protection is very much needed in exposed localities and northern latitudes is now getting to be pretty well understood by intelligent pomologists. Yours, it seems to us, possesses considerable merit, and is cheap. It might be made still cheaper and lighter by using narrow stuff without materially impairing its usefulness. We shall be glad to hear more about it at the end of the season. In the mean time, we hope somebody will give it a trial. Thank you for your very generous offer; but you had better withdraw it, unless you are quite sure of your vineyard, for we are decidedly great on the "half-shell."—ED.]

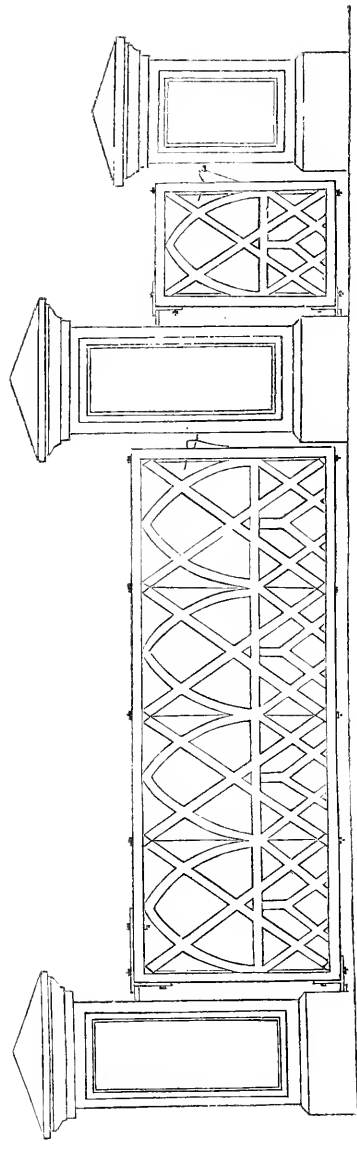


FIG. 1.

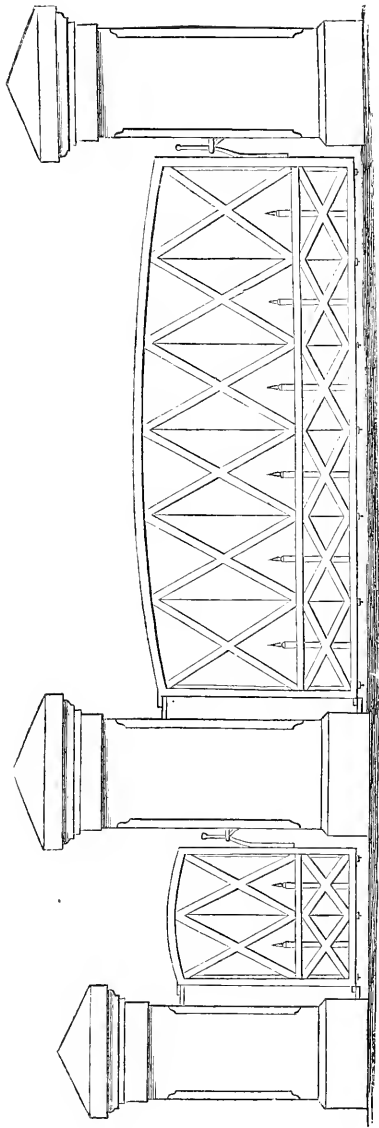


FIG. 2.

## A CHAPTER ON GATES.

By GEO. E. WOODWARD, Architect and Civil Engineer, 37 Park Row, N. Y.

A FEW years ago, we wrote an article for the *Country Gentleman*, on the application of the principle of the truss to all classes of wooden gates, illustrating it with the present figures 3, 5, 6, and 7, and in 1861 prepared an article for the *HORTICULTURIST*, illustrated with the present figure No. 1.

tenoned, and there are no nails about the gate. There can be no sagging under any circumstances; but should such a thing occur from unequal shrinkage, it can easily be remedied by placing a thin strip of wood or sheet lead under the foot of the braces running forward. There is economy in the

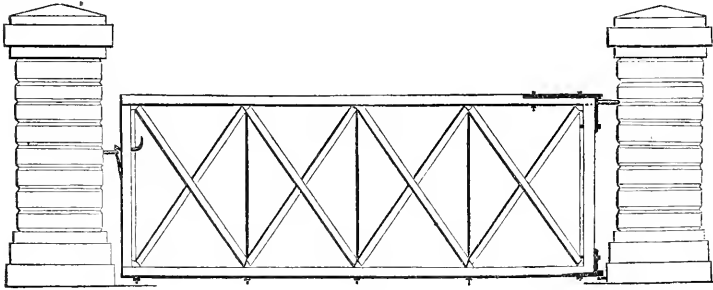


FIG. 3.

Since then, in our professional rambles, we have accidentally noticed some thirty gates erected after these designs in different sections of the country, and, for aught we

construction of these gates, as they can be made with a less number of joints, and greater strength and stiffness secured with lighter materials, than in any other style of

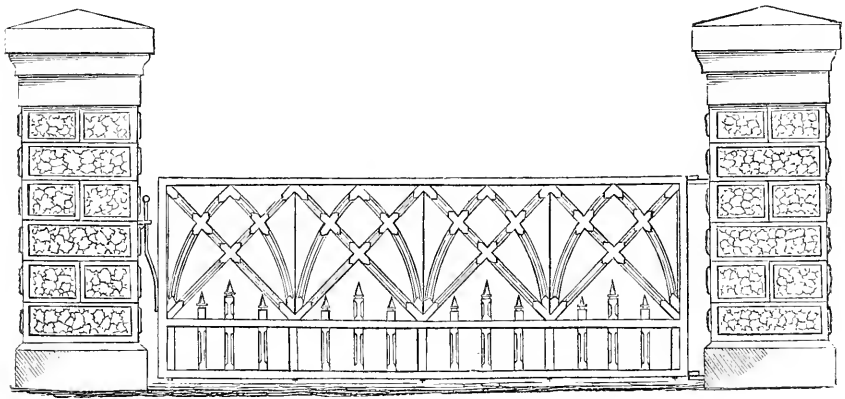


FIG. 4.

know to the contrary, it is one of the most popular gates that swing. The principle of this gate is best shown in figure 3, and consists of four panels of braces crossing each other, and held firmly in position by five iron rods, which can be tightened by the screws at the bottom. The braces are not

gate we know of. The principle is the one used in railroad bridges and roofs of great span, and our own experience with them, having built and tested all the gates here illustrated, is, that they possess very decided merits.

Fig. 4 is the principal entrance gate to

one of the finest estates on the Hudson, above Tarrytown, and although similar in appearance to figure 1, has some very decided differences, the cross braces in this case reaching only to a second rail; the rods, however, pass through to the bottom; it is much more elaborate in workmanship, and the addition of a moulding on the top and bottom would increase its effect.

Fig. 5 is the entrance gate at the New

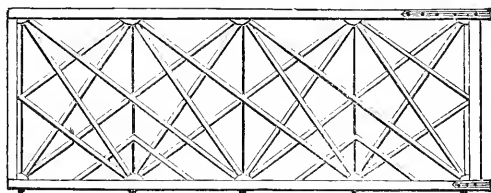


FIG. 5.

Windsor, N. Y., Parsonage, and has been hanging four years without a perceptible change. The braces in this are one inch square and doubled; they are not halved, but cross each other, two one way and one

gate held together by iron rods will remain good until the last brace has decayed.

Fig. 7 is the principal entrance gate to one of the most finely finished country seats on Newburgh Bay.

Figs. 8, 9, and 10, illustrate a novel style of hinge, peculiarly adapted to this gate, and is really stronger than any other. It requires less iron and less blacksmith work.

Fig. 8 shows the top hinge corner, and



FIG. 6.

figure 9 the bottom hinge corner. The iron which secures this end of the gate, passes through both top and bottom hinge, and binds them and the gate securely together. The additional fastenings for hinge are

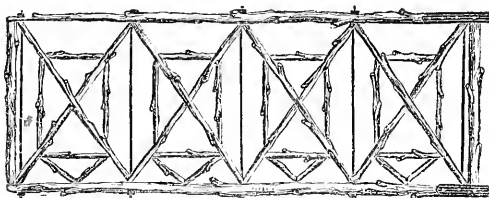


FIG. 7.

the other, in the manner shown in figure 6.

There is no other mode of constructing gates in which rustic work can be made such good use of. The chief objection to all things made in the rustic manner is, that

made with carriage-bolts. Nothing but a power beyond the enormous tensile strength of iron and the compressible strength of wood, will cause the gates to yield in ordinary use.

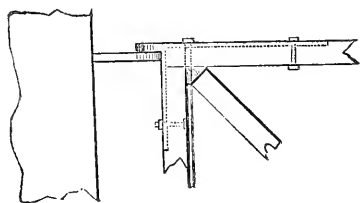


FIG. 8.

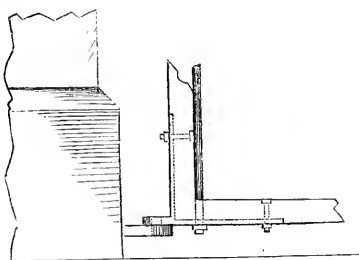


FIG. 9.

they soon fall to pieces, limbs shrink and twist, and nails do not hold; but a rustic

Fig. 10 is a perspective view of the hinge, showing how it may be counter-sunk, and



thus almost entirely concealed. Figs. 1, 2, 3, and 4, also show the hinge, and four different styles of stone gate piers.

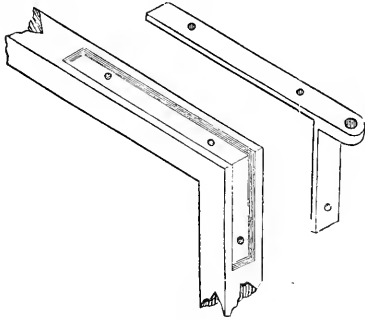


FIG. 10.

Fig. 11 is intended for a farm gate. The cross rails are secured by carriage-bolts

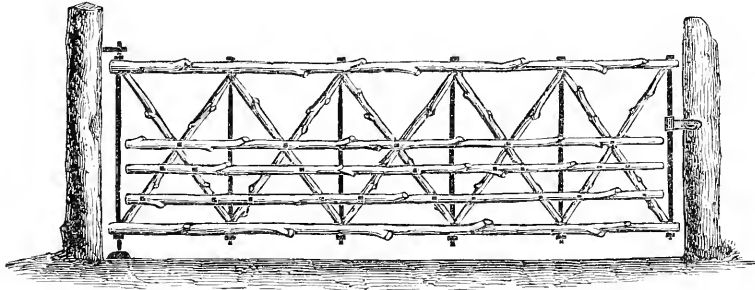


FIG. 11.

passed through them and the main braces. Each end of the gate has an iron rod only, which is made heavier than the others, and saves framing. The hinge is made by having

the iron rod project beyond the bolt head and nut, and the upper end is passed into an eye, as shown in Fig. 12, which is screw-

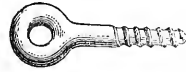


FIG. 12.

ed into the post; the lower end is pointed, and is placed in a stone as shown, or it may rest on solid iron of similar form to the eye. Any intelligent laborer, with an axe and auger, can, with the iron work, make these farm gates.

This principle of constructing gates admits of an infinite variety of designs; those given are merely suggestive. It admits of all classes of workmanship, from the plainest

to the most elaborate, from the simplest farm gate to those required for the finished park, and in beauty, strength, and economy stands unequaled.

## ORCHARD CULTURE, ETC.

BY OLIVER TAYLOR, LOUDON CO., VA.

P. B. MEAD,—A few observations and hints that I wish the public to possess, I hereby send thee, viz.: Fruit trees in grass, or not cultivated in some manner, so as to keep down the grass and weeds, will not do well here in this part of the country as a general rule, and only in very few exceptional cases will any fruit tree bear well for several years

without cultivation, or some substitute for cultivation, that will keep the grass from growing near the trees, and insure a regular supply of moisture to the roots. I do not doubt that, in a more northern climate, an orchard may be put in grass with advantage; but it will not do here in our cold, clay soils, so far as our experience and observations

teach us, and this I think for the following reasons: Our springs being gradual and long, the grass gets the start before the roots of the trees are very active, and when the hottest part of summer comes on, the grass or weeds have absorbed the moisture and strength from the soil to such an extent, that the tree can not get a sufficient quantity; hence it stops growing; and if it has a crop of fruit to support, the tree will be so exhausted in supporting the crop through the long dry summer weather we generally have, that it seldom gets over it for years after sufficiently to produce another such crop. I know of no orchard any where in this country that has borne well, that was not cultivated regularly for several years previous, and the best peaches I saw in 1861, that trying season with all orchards, was from an orchard some fifteen years old, that had been cultivated regularly. I am aware that a seedling fruit tree of inferior quality may spring up and grow, and bear for many years in succession, in some neglected place; but if we wish large and rich fruit in abundance here, year after year, with all our frosts, droughts, and moderately rich soil, we can not achieve success by growing grass in the orchard, even though we keep it all clear from the trunk of the tree as far out as the limbs extend, which would be heavy labor to perform by hand. Hot, dry seasons act far more against an abundant crop of fruit than any thing else, because we have the most fruit in the coolest and wettest seasons on the average, (but grapes may be an exception to this rule in damp soils.) It is true, also, that constant and deep plowing under the trees produces much injury, but more injury, no doubt, occurs from the prevalent practice of high trimming, which, so far as I can observe, has killed more than three-fourths of the bearing trees in these parts by allowing the sun to act too powerfully on the trunk and large roots near the surface of the ground. The practice of growing grass in orchards here will always prove a failure, though it may not in other soils and more northern climates.

The influence of the graft to determine the shape of the roots is quite plainly seen in

taking up trees in the nursery. We have often noticed the upright growing varieties invariably have roots that tend more directly downward, and those of more spreading habits have more spreading roots, while those of irregular growth, such as the Wine-sap and Smoke-house, have many irregular roots; and those trees of small, wiry growth, such as the Cannon Pearmain, Bellefleur, and the Summer Pearmain, have fine and numerous roots; though all varieties may have been grafted on one lot of seedlings. This influence is so easily seen, that any one used to handling trees sees it plainly manifested in nearly, if not quite all, the varieties of apples.

A few words upon Grapes, next, if not equal to the apple in true value, and my favorite fruit any way. Among the favorite varieties stand the Rogers's Hybrid, so large, mild, and hardy, and in these parts ripening from the last of August to frosts, and hanging on to the bunch well. As to the qualities, I have taken the opinion of a great many visitors the past two summers, and after giving them Concord, Diana, Rebecca, Catawba, To Kalon, Lenoir, Clinton, and several other old varieties, and then a No. 4 of Rogers's, they all, with one single exception, exclaimed, "This is the best you have given me, decidedly." That one exception preferred the Catawba, and said she liked the strong, foxy taste of the Catawba. No. 4 is in use just after the Concord, and is much the most pleasant eating grape, dark color, large berry, and abundant bearer so far. Nos. 33 and 34 are two to three weeks later, and also black, larger than No. 4, and good bearers. Nos. 14 and 22 are too late north of this, but very large and showy, with good flavor. No. 3 about as early as No. 4, and No. 15 a few days later, much in color like the Catawba, but much sweeter. Many other varieties of these seedlings will doubtless prove fine here, and some, I think, will not ripen any season, even here. Altogether, they are the most decided acquisition we have had in the grape line for many years, and no doubt they will create quite a stir when they are exhibited in all their perfection.

Our hot, dry, long summers, ripen the grape most seasons to perfection, and though a wet spell, when one variety is ripening, causes it to burst and decay soon, still the most of the varieties are sure to get enough heat during September to sweeten them nicely, and the past September some few kinds got so well ripened as to commence to dry up on the vines in well-drained dry situations, such as the Delaware, Garrigues, Isabella, and Constantia. The Delaware we dried, and are now eating very good raisins from them, without any care but simply drying them.

I would like to know who has the largest specimen of *Golden Arbor Vitæ* in America. I have one that is about seven feet tall, and as large around in proportion as they generally grow. It is very much admired, and surely is a fine specimen. Can any one excel it? If so, let me know.

[This is just the testimony, in regard to orchard culture, that we should expect from a man of such large experience as Mr. Taylor: candid as to himself and fair to others. If

cultivation is the good thing we all claim it to be, it ought to be good for orchards, and that is our conviction. Like other rules, it may have its exceptions, but these must be very few. We are glad to hear such a good account of grapes. You will always have fine grapes in your climate. We have felt much interest in the Rogers's Hybrids, but have not seen enough of them to determine their exact place among grapes. We are inclined to believe that No. 4 will prove to be at least as good as the Concord; it is very much that style of grape. We should take our place with your lady friend, however, in preferring a juicy, vinous grape, to one that is dry and buttery. But we are glad to hear every good thing of these Hybrids. The Delaware, carefully dried, makes an excellent raisin; but, like you, we have had very good ones by simply letting it dry itself. We have been about a good deal, but we have nowhere seen a *Golden Arbor Vitæ* to compare with yours in size. We would walk a long distance to see it. The largest that we have seen belongs to William Kelly, Esq., of Rhinebeck, N. Y.—ED.]

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## D W A R F P E A R S .

BY T. T. S.

MR. EDITOR,—I am right glad to see that you have taken up your pen on the subject of Pear culture. I love the Pear, and I am pained to see the ill success and failure which too often attend its cultivation through want of knowledge, especially of the Dwarf Pear.

A Standard Pear wants good and careful treatment, a Dwarf Pear wants the BEST of care. Many, particularly people along in life, will not put out Standard Pears because they are a good while in coming into bearing, and will not plant Dwarfs because they fail with them. So they go without the best of fruits. This is useless. I believe that the principal great failure in Dwarf Pears is caused by a want of knowledge of the proper system of pruning. The system recommended in this article I know is attended with success. Let

us for a moment consider the nature of what we have under consideration, its capabilities and its peculiarities. The Pear is made a Dwarf by being budded on the Quince root; the Angers Quince being used mostly for this purpose, because of its being a rapid growing kind. We all know that the Quince is a slow and small grower, partaking more of the form of a large bush than a tree. While on the other hand the Pear is naturally a large and rapid grower. Here are presented two natures, which we wish to combine and make subservient to each other, in antagonistical relations to each other. The Pear wants to grow to a large tree. The Quince root objects, and wants to grow a small tree.

It is evident that in some way the Quince

root and Pear tree must accommodate each other—their different natures must be reconciled. How is this to be done? Answer: Develop in the Quince root its fullest capabilities to nourish the Pear tree. Do this by always keeping the ground mulched, enriching the soil, and by LIBERAL CULTIVATION. The roots of the Quince neither extend deep nor wide, so feed liberally by top dressing. Next, so proportion the tree to the root that the root will not become exhausted in supplying the tree with sap. This is to be done by constant reduction of the limbs of the tree year by year. Commence with the tree when it comes from the nursery. So prune it that it will be broad at the ground and narrow at the top. Cut the limbs back to two or three buds, and each succeeding spring cut back two-thirds of the previous year's growth. By this system the tree is kept within the bounds of the power of the root to supply nourishment to the tree. The result is, that a uniform, vigorous, healthy

growth is obtained. On the other hand, if the Pear is allowed to have its own way, it will at the beginning make a faster growth than the root can afford. The tree become exhausted and diseased, and then "Dwarf Pears are a failure."

Once for all, plant below the place of budding, prune SEVERELY until the tree has become firmly established, pay attention to the "Hints" in February number, and success is yours.

[We are much obliged to you for this brief article on Dwarf Pears. We shall welcome every thing having a tendency to replace Pear culture in its proper position in the estimation of the public. The article was crowded out last month, much to our regret. That was the case with our own on the same subject, and the necessity seems to be on the point of repeating itself. We shall be glad to hear from you again.—ED.]

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### THE EARLE PEAR.

WE are indebted to Mr. F. R. Elliott, of Cleveland, Ohio, for portraits and descriptions of several new varieties of Pears. We have had them engraved, and herewith present one of them, named the Earle Pear. We have never seen it, that we can remember, and can therefore add nothing of our personal knowledge. The following is Mr. Elliott's description:

"FRUIT: *Size*, medium. *Form*, roundish oval, slightly one sided. *Color*, light, clear, pale yellow ground, with scattered minute dots, with pale green suffused underneath,

around them; a faint blush on the sunny side, and occasional small patches of thin light russet. *Stem*, short, half to three-quarters of an inch in length. *Cavity*, open, of moderate depth, russeted at base. *Calyx*, small, with five narrow, distinct, erect segments. *Basin*, open, regular, smooth, round, pretty deep. *Core*, solid, eatable. *Capsules* small. *Seeds*, partially imperfect, dark brown. *Flesh*, white, rather coarse-grained, breaking, juicy, sweet, slightly aromatic. *Season*, late autumn and early winter. Origin, Herkimer County, New York."

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### GLEANINGS.

BY E. H. C.

ABOUT fifty years ago, M. Durand lectured on mineralogy in Paris, and he thought he proved that there is *sensibility* in stones. His great point was the love of the stone

for the sun. It was quite a rose and nightingale scandal. Take a solution of salt, put one half of it in the sun, keep the remainder in darkness. Superb crystals will form

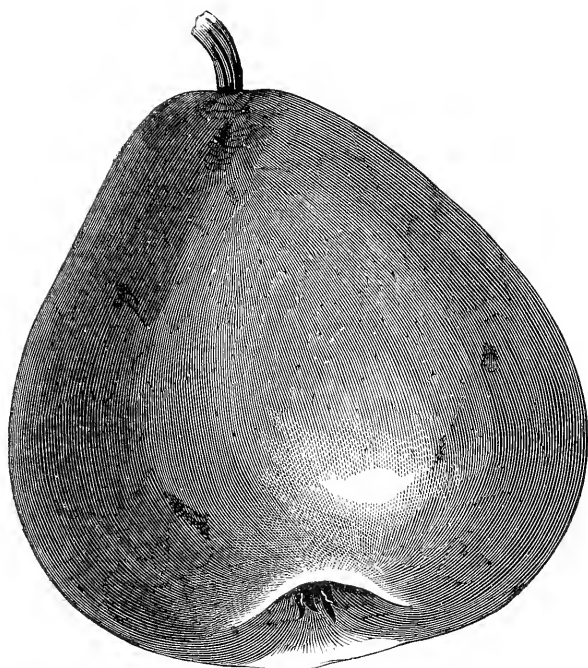


FIG. 1.

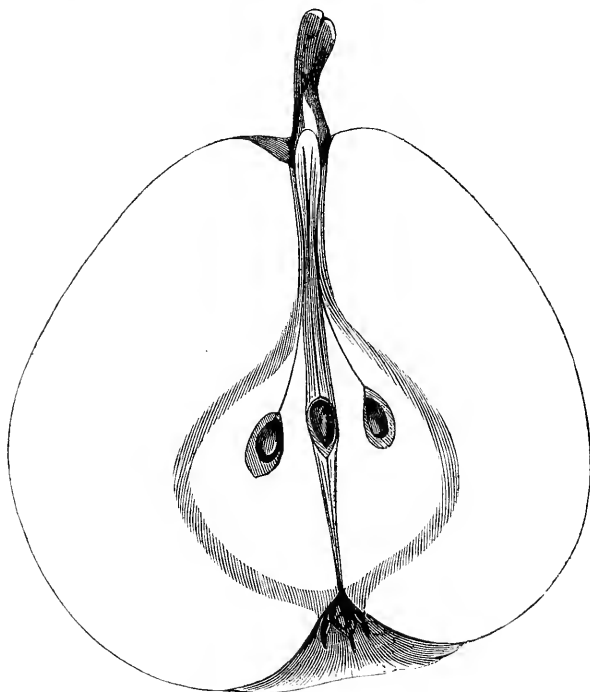


FIG. 2.

under the kiss of the sun, while in the shade the salt and water will remain as they were. Light, said M. Durand, goes, therefore, into the composition of the crystal. Diamonds are almost wholly composed of sunlight; they are only found in places where the sun gives heat and light enough to make them. Now, said the French philosopher, what do you call that reception of light to the bosom of the stone? what can you call it but *love*? He went further, and asserting that all the highest mountains are placed under the equator, called them lumps of sunlight. They are imitations of the salt experiment on a large scale. Their granite peaks are crystallized light, but incomplete crystals. Give them more light, and they will be complete; they will become crystals of the sublimest order; they will be diamonds, real Koh-i-noors, or mountains of light. If the sun was a little brighter and a little hotter, Chimborazo would be all one diamond, the Himalayas would be diamond steeps, and all towns in the East, over the sunny sides of their walls, would have diamond turrets, like Amherabad. Every sun-baked brick of Egypt would, in that case, become a jewel worth some quarts of Koh-i-noors.

All this is the result, if the theory be correct, of the sensibility of stones. The whole earth, many sages believed, Kepler among them, was alive. M. Patrin taught of the earth how metals, plants, and minerals were formed of the gases within its body. It is not, to be sure, sensible like a man, but like a world. It could not talk words, but it could talk things.

This is not, after all, so very absurd. If the things in nature are not sensible, they certainly are not stupid. Bonnel used to say, that at the end of all his studies he could not see the difference between a cat and a rose bush. Let us see what the wits are that a rose bush has. Look at its leaves, with their smooth, glittering surface turned to the sky. But their under surfaces are soft and full of pores, open to catch the moisture rising from the soil; half open when they need only a little, closed when

they want none. The rain that falls upon the waxy roof, made by the upper surface of the foliage, runs off, and is dropped into the ground just over the sucking ends of all the rootlets. Turn some of these rose leaves upside down. Lay a cat on her back, and she will not consent to remain long in that unnatural position. The rose leaf, too, objects to be inverted. A man may bend a branch so that its leaves will hang the wrong side upward; but let him watch it. He will observe how all the little leaves slowly and very carefully begin to turn on their stems. At the end of a few hours every leaf will have brought round its polished surface to the light, and be holding its open mouths again over the ground for drink.

Is the plant stupid? It knows what it wants, and likes it, and if it is within its reach, it will obtain it. Put the rose bush into your garden, with dry, poor soil on one side, and rich, genial earth on the other. You will not find it suffering its roots to be long in the dark about the trick that has been played upon them. They start out, of course, as usual, and as the mail-coaches used to do, in all directions; but those that begin their journey through the poor soil, receive in a mysterious way, some information of the better land that is to be found by traveling in a contrary direction. Accordingly, they all turn back to follow their companions who have gone into the richer pasturage. Undertake to put these roots into a jail by digging a trench round the rose, or sinking a stone wall into the earth. The roots dive into the ground until they reach the bottom of the obstacles, then pass it, and run up again until they find the level that pleases them best.

Who will now undertake to say that a plant is not sensible? If you go into the fields, you will tread upon a multitude of flowers that know better than you do which way the wind blows, what o'clock it is, and what is to be thought about the weather. The *Calendula arvensis* opens in fine weather, and closes again when rain is coming. The *Sonchus Sibericus* shuts up at the end

of each day's business, but only remains tranquilly asleep when it has no doubt at all about the morrow, but knows it will be fine. Let a traveler seek shelter from the sun under an Acacia, with thorns as white as ivory, which Linnaeus calls the *Mimosa eburnia*. The dark shade on the sand perhaps becomes suddenly flecked with light. He looks up, and observes that his parasol is shutting itself up; that every leaf is putting itself to bed. If he will look closely, he may observe, too, that the leaves sleep by the dozen in a bed, nestling together in small heaps. The traveler has nothing to complain about; he does not need the shade; there is a cloud over the sun. The tree thinks—one is almost obliged to say the tree *thinks*—that it will come on to rain. There is no reason why all its roots should not be watered in the arid soil; and there is no reason why its leaves, delicately set on slender stems, should be beaten from their holdings. The leaves, therefore, are shut up and folded together in small bundles, that they may find in union the strength which in isolation they do not possess, while at the same time room is left for the rain to pass between them to water the roots.

There is not an hour of the day which is

not the beloved hour of some flower, to which she opens her heart. Linnaeus conceived the pleasant notion of a flower-clock. Instead of a rude metal bell to strike the hour, there is a little flower-bell, ready to break out at three o'clock; a star-flower that will shine forth at four, and a cup will appear at five o'clock, perhaps to remind old-fashioned folk that it is tea-time. Claude Lorraine, although he did not make a clock of four and twenty flowers in his garden, was a landscape painter most familiar with nature; and when he was abroad he could at any time know what the hour was by asking the flowers of the field. It would have been of no use for him to ask a cat. The peasants of Auvergne and Languedoc, all have at their doors beautiful barometers in which there is no glass, quicksilver, or human handiwork. They are furnished by the flowers.—*Aimé Martin, Lettres à Sophie.*

[There is no end to the wonders that may be found in the field of Nature. If you should "glean" there a whole lifetime, you would still find new objects of interest. We may never master the mystery which surrounds many of them, but we are wiser and better for trying to do so.—ED.]

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## INTERIOR VIEW OF THE "BRIGHT NUT" EXTENDED.

LEAF-MOULD, MUCK, AND CHARCOAL IN VINE BORDERS.

BY FOX MEADOW.

*Concluded from p. 132*

WE do not intend to dispute the authority of "Dr. Thomas Anderson, Professor of Chemistry in the University of Glasgow!" of the possibility of the protoxide of iron being formed by the decomposition of vegetable matter "*without access of air*;" neither did we claim any superiority for muck on any such ground; but we do still claim, as before stated, that vegetable matter in swamps is decomposed with the "partial" exclusion of air, and consequently a greater portion of its carbon remains in the *exact*

condition to answer the purpose of charcoal. Now it is well known, that when oxide of iron exists, it is usually in the form of the *peroxide*, and that it sometimes exists in the form of *protoxide*, which is poisonous to plants, and renders soil unfertile. This latter (*protoxide*) is sometimes detected in common soils; but will Dr. Anderson, or any other Dr., affirm that, if such soil be thoroughly plowed and worked in such a manner as to freely admit air and water, that this compound will not take up more

oxygen, and so render this *protoxide* a *peroxide*, and thus make it available for plants? Dr. Anderson would preach no such silly nonsense! Suppose sulphuret of iron compounds *are* found in *green* muck just dug from swamps, did Dr. Anderson or that "other Dr." ever discover their presence there after a winter's frost had acted upon it? or when such alkalies as potash, soda ash, or white ash, or strong wood ashes were used in its preparation? Never! Then if this "*protoxide*," or its possible production, "sulphuret of iron," only exists where *no air* is found, of what consequence is its poison to plants which only grow *where air is*? Is not Mr. Bright endeavoring to frighten the readers of this Journal out of the use of the best natural vegetable fertilizer found on this great Continent by a mere "Will o' the Wisp" argument? Dr. Anderson would tell Mr. Bright that swamp muck, aerated, and properly incorporated with such alkalies as previously named, *is not second to the best of cow manure*, and in the place of its being a sour, poisonous destroyer of plants, is superior to any "special fertilizer" ever concocted by "Bright" or any body else.

But what of Charcoal? What says "Prof. Lindley, of the London Gardener's Chronicle, the most distinguished vegetable physiologist of the age?" With all due respect to Dr. Lindley as a vegetable physiologist, yet, if he was put to form grape vine borders, and required to produce a crop of grapes, he would turn out in the end just as our poor penitent friend Bright has, *a miserable failure!*

The readers of this Journal would naturally suppose, by Mr. Bright's quoting the authority of Dr. Lindley on charcoal, that the Professor had direct reference to vine border making; but, instead of this, we find he is talking about "Iron clads" in the dock-yard at Cherbourg! M. Lapparul, Inspector General of Timber, with a view to the preservation of ships from decay, has adopted a process consisting simply in directing a powerful jet of gas on the wood, so as to penetrate every crevice; the char-

ring being sometimes facilitated by the addition of a very thin coat of tar. So much for charcoal in vine borders, and its evil tendency based on the opinion of Prof. Lindley! Dr. Lindley, however, is of opinion that charring ship timber will not prevent "dry rot," and this is the gist of the whole subject. Dry rot is, of course, a species of fungous growth, and we are of opinion, with Prof. Lindley, that charring *will not* prevent this growth of Fungi *when already in* dry timber or charred matter, or charcoal when *immediately under the action of atmospheric influences*. But we deny in toto that such Fungi growth will ever be produced on a piece of charcoal *under ground in a vine border!* Nor in swamp muck, nor in decomposed leaf-mould!\*

"Old Oaks, dating at least from the time of King John," says the Doctor, "which have never shown a trace of Fungus, except such species as affect the bark and not the wood, if accidentally burnt, produce on the charred surface an abundant crop of the very Fungi which occur in such profusion in our dock-yards on badly seasoned timber." Of course; and who is there, having any pretensions to horticulture, who is supposed to be a close observer of Nature's never-deviating laws, that is so ignorant as not to be cognizant of this fact? Is a piece of hard burnt charcoal prepared earthy matter containing the organic and inorganic food of plants? Is the living wood of the oaks in question affected by this Fungi? Not at all, but the moment death takes place, that moment inevitable *law* by degrees decomposes its hardened tissue, and compels it to return from whence it came, and be once more the proper food of plants! All charred matter, if left under the full influence of the

\* Perhaps one of the greatest of earthly blessings to a farmer working a poor piece of soil, would be to find it literally covered some morning in the early spring with "toad-stools;" and if he was a man of ordinary ingenuity, he would embrace the precious opportunity of "plowing under" such a splendid *green* crop of the cryptogamia. The richest pasture lands of England are white over with *Agaricus campestris* and *Morchell esculenta*; and when *Tuber cibareum* is dug from the roots of Oaks and Beeches, no person ever found their roots rotten by the action of Fungi growth!



air, undergoes a similar state of fungoid or chemical decomposition. It is immaterial to this "Divine law" whether the subject it acts upon be a piece of rotting stick, charred stick, iron-clads, or the adamantine rock! The Doctor admits, as all do who know any thing about the properties of charcoal, its great antiseptic power, and refers back to Cæsar to show, from his writings, that stakes were charred at their ends to preserve them from rotting in the soil, and also speaks of the advantage derived by charring the ends of gate-posts. To suppose that charcoal or decomposed leaf-mould, placed *in the soil*, will produce a fungus growth deleterious to healthy vegetation, is too absurd to reason upon, and to endeavor to clap on the shoulders of Prof. Lindley the "authority" of such an opinion is a base calumny and a vile slander. If the Professor is not a practical gardener, he is an excellent botanist, and a sound vegetable physiologist, possessed of too much common sense to write or advocate such trashy nonsense as Mr. Bright would willingly impute to him. I trust that this calumny will never get to his eyes or ears.

If Mr. Bright should ask Dr. Lindley for his opinion of the *use* of charcoal *in* the soil, (vine borders,) he could refer him to thousands of instances of it as an effective fertilizer, and especially to those plants grown under glass. Heaths, Rhododendrons, Cucumbers, and Melons, Onions, Roses, Orchidaceous plants, Camellias, Hydrangeas, Pine-apples, and a host of other plants, have been the subjects of extensive and successful experiments; and we will vouch our word for it, that Dr. Lindley would tell friend Bright that charcoal may, with decided advantage, be applied to almost every known plant in cultivation. He would tell him that carbonic acid applied to the roots of plants renders them more luxuriant and productive than other plants to whose roots no such application is made. He would tell him that charcoal "*in*" the soil kept moist, slowly combines with oxygen, and emits carbonic acid, and he would also tell him that decomposed leaf-mould and prepared swamp muck will do the

same, and on which principally depends the solubility of mineral substances. Now is it any wonder that a man like friend Bright, who ignores (very recently) charcoal, leaf-mould, and muck, should utterly fail in the culture of the vine? We can tell him from practical knowledge of over thirty years' toil and study, that he nor any other living man will ever permanently and successfully grow crops of grapes without bounteous supplies of rich carbonaceous food; for without it your salts and your silicates, and all the other jumbles of compounded minerals, will be no better *in* or *on* your borders than so much insoluble flint!

Here we have presented some of the "theory" of muck, leaf-mould, and charcoal, by which we do not expect to wholly reclaim friend Bright from his *past* errors, but hope and trust it may have some influence on his *future* action; and if his heart is so hard, and his stubbornness so great, that he won't swallow this cup of common sense, and will not "honestly imbibe the wormwood," he should be at least "magnanimous," and not lead others into errors that will involve them in utter ruin. As to our "owning up," we think we have done so honestly; but to place our own individuality "along with us"—O good gracious! This reminds us of the fox who got his tail chopped off in a trap, and persuaded all his brothers to cut off theirs! *it looked so much better to be all alike!* But *this* "fox" don't see it.

In closing this subject, we respectfully invite our poor brother, the "Pilgrim now in the pillory," to take another annual trip and see "Fox Meadow;" it will do his poor desponding heart good, we know, to look at our vines, *hard forced for seven years*, with thousands of Hamburg leaves measuring over twelve inches across, and bunches of fruit in proportionate size, growing in MUCK and SAND, mulched with a foot of rotten leaves! We also extend the invitation to all those faint hearted amateurs who have been led to *doubt* the practical use of a good rich carbonaceous soil by the cloud of smoke thrown over their mental vision from that luminous and "Bright" propounder of poisonous fungated Leaf-mould.

[Since this controversy has been under way, we have received a number of letters from parties not yet "deeply founded in the faith," asking whether there *is* any danger in using muck, &c., and whether they must continue to follow the advice that we have long and persistently given them. This makes it necessary for us to say again, without reference to either side of this controversy, that there is no one thing of greater value to all who grow plants, than carbonaceous matter in some of its forms.

We never advise the use of a thing unless we *know* it to be good; and we do not believe that, among all the readers of the HORTICULTURIST, there is a single one who, having faithfully followed our advice, has had cause to regret it. Let the doubting, therefore, and those of little faith, be reassured, and go straight on in the "carbonaceous" path that we have marked out for them, while Fox Meadow and Mr. Bright discuss the merits of leaf-mould and muck.—ED.]

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## A HALF DOZEN ANNUALS OF EASY CULTURE.

BY THE EDITOR.

WE continue our list of Annuals this month, giving six more, of easy culture. Some of them might have been planted last month, in-doors, but we had no room for them. They will do well, however, planted at once in the border, but will not bloom so early. It will be observed that we confine the list strictly to annuals; hence, *Dianthus chinensis*, *Lobelia erinus speciosa*, and some other beautiful plants, are excluded, but will not be overlooked. There are quite a number of very fine half-hardy biennials that bloom abundantly the first year, and are practically regarded and treated as annuals. None of these will be forgotten.

As the seeds of the plants about to be named are to be sown in the border, a few words may be added, as to the best mode of doing so. The ground must, of course, be spaded up; it should then be raked clean and fine. We shall take it for granted that the border has been properly enriched, but not made gross by the addition of large quantities of coarse manure. The drills for the seed may be made in various ways. A good and neat one is to use the rim of a flower-pot six inches or more in diameter. This is to be pressed into the ground to the required depth, the seed covered, and the earth pressed gently upon them. A label, having written on it the name of the seed, is to be placed in the center of the circle. Another mode is to

make a short, straight drill, with a pointed stick or a trowel, placing the label at the end of the drill. In both these methods, weeding is easily done without disturbing the plants. The too common method of scattering the seed here and there in the border, has nothing to commend it. On the whole, we commend the rim of a flower-pot, especially for the ladies. In the case of very large seed, where only one is to be planted, it may be pressed into the ground with the finger, or a hole be opened with the trowel, and the seed dropped in. Whatever else may be necessary in the way of direction will be mentioned in its place. We now proceed with the list. The seed should be at the depth we name when they are covered.

1. *Zinnia*, (*vars.*)—Sow the seed about a quarter of an inch deep, and an inch apart, if the seed are plump and good; otherwise sow thicker; or two or three seed may be sown where the plant is to stand, and the surplus transplanted. If the seed are sown in drills, they may be transplanted as soon as they are well out of the seed leaf. The *Zinnia* grows from two to three feet high, and develops itself best when grown singly. A pretty clump may be made of three plants placed triangularly about fifteen inches apart. They make a pretty center for a circular bed. *Zinnia* may also be used as a bedding plant, though we much prefer to see it used as a

center for a bed, or in the border. The colors are various, some being very pure and brilliant. It remains in bloom a long time. The double Zinnia, when it "comes" good, is very fine. It has been likened to a Dahlia; but, to our apprehension, it is much more like a double Marigold in form. The Zinnia is one of the best, as it is also one of the most popular of annuals.

2. *Clarkia*, (*vars.*)—Sow the seed very thin in drills or circles about an eighth of an inch deep. They may be transplanted when an inch or so high. It is a good plan to sow a few seeds where the plants are to remain, and thin them out, as they are somewhat troublesome to handle by the beginner. The *Clarkia* grows about two feet high. The color is mostly rosy red. It is a very pretty plant for the border. It is best grown singly. The most desirable are *C. marginata*, *integripetala*, *nereifolia*, and *elegans*.

3. *Candytuft*, (*Iberis*, *vars.*)—Sow the seed thinly in drills or circles about an eighth of an inch deep. It may be transplanted when an inch or so high; but as it blooms finely in masses, it is well to sow it where it is to remain, and thin it out. From six to a dozen plants may be left in a clump. It may also be grown singly. It makes a fine edging for a bed or border. It grows from six to twelve inches high. The colors are various. *Iberis speciosa* is one of the best. It is a very neat and pretty plant.

4. *Tropæolum*, (*vars.*)—We include here only the *dwarf* kinds. Sow two or three seeds where the plants are to remain. Place them about three quarters of an inch deep. This is better than to transplant them at this season. The dwarf *Tropæolum* grows scarcely more than six inches high. The colors are mainly yellow and crimson. It is a very fine and showy plant for the border in single specimens. It is also a good edging plant, and equally as good as a bedding plant. It will in time become very popular, as it deserves to be.

5. *Calliopsis*, (*vars.*)—Sow the seed thinly in drills or circles, about a quarter of an inch deep. Transplant when about an inch high. Or, sow a few seeds where the plants are to remain, and thin them out. It should be grown singly. It grows from two to three feet high. The colors are mostly reddish brown and yellow. It blooms constantly and abundantly, and is very desirable in the middle of a border.

6. *Portulaca*, (*vars.*)—Sow the seed on the surface, and sprinkle a little fine earth over them; after which press the earth upon them with more than usual care. The seeds are very small, but vegetate readily when the weather becomes warm, and not till then. The plants are so troublesome to handle, on account of their small size, that it is best not to transplant them, except to fill up vacancies. *Portulaca* grows close to the ground. The colors are various. It blooms very freely, especially during our hottest weather. The chief objection to it consists in the fact that the flowers only open when the sun is out; still it is a pretty and desirable plant. After being once grown, the seed will come up abundantly in succeeding years. It makes a very pretty edging plant, and in some situations may be used effectively for bedding purposes. In this case only one color should be used, and that a bright one, such as rose or crimson.

This completes our second list of annuals. We may add here, that weeds should be eradicated on their very first appearance, so that they may not in the least interfere with the growth of the young seedlings. Such plants as require support should be neatly tied to stakes, these being as much as possible concealed. We abominate sticks among plants, and never use them except in case of real necessity. Of the plants in this list, the only ones likely to want support are *Calliopsis*, *Clarkia*, and *Zinnia*, but these not always.



## ORCHARD CULTURE.

BY P. G. BERTOLET, OLEY, BERKS CO., PENN.

It may be that the "skillful market gardeners" you speak of, have profited by the lesson of the dying father, who had nothing to leave his two sons, save a piece of land, who enjoined upon them that they should *dig* it diligently, and they should find a mine of gold in it (not more than a foot from its surface). They were faithful to their paternal injunction, and the ground in consequence became very productive, and they soon discovered the gold therein—the reward of their labor.

This is the right way—the lock to success, no doubt, where gardening operations are to be carried on, and will yield a golden harvest in return, especially about cities and towns; but then it does not follow that this system would be universally, and in all, and every situation, equally profitable. "Double cropping" orchards, in places remote from market, will not pay.

1. We contend that *deep* plowing, or digging about apple-trees, so as to enable root-cropping, is injurious to our trees, in causing *inferior fruit* and premature decline in trees.

2. When the grass and other "robbers" of nourishment are kept out of the way of the trees, with proper top dressing, (which may be raked in the top soil,) the tree will survive longer, grow more vigorously, bear the finer and better fruit. (*Note*.—Nature produces the most splendid trees by her simple system of natural mulching every year.)

3. We believe in the judicious selection of situation and proper preparation of the ground by deep plowing or digging before planting the trees of the orchard.

My ancestors planted an orchard in this place, over a century ago, on a fine, dry, and elevated situation. It so happened, that when the trees were planted, one had to be set in a hollow to fill up the rows. This, in consequence, became inaccessible to the plow, and has long survived all its contemporaries, which were plowed to premature decay and death by the over-diligent digger and double-

cropper of the soil. This tree, though, we are positive, over one hundred years old, is yet vigorous, apparently healthy, beautifully symmetrical, and bears its fruit every season, which is of fair appearance, though of indifferant quality; but then this latter modern requisite was not so material in the days of "*apple-jack*." Other cases in proof could be cited *ad infinitum*.

We doubt not but that we shall agree perfectly upon the subject of ORCHARD CULTURE, when we come to understand each other a little better. We wish that the Editor would express himself more explicitly as to the particular species of cultivation he recommends and approves of for apple orchards. If your cultivation of the ground in orchards means manuring, mulching, liming, and various other fertilizing applications as top-dressings, we agree perfectly; but if it means *digging* to such a depth as to enable "root cropping," we must agree to disagree, notwithstanding all the "hundred skillful market gardeners" to the contrary. It would not pay in this locality at least. Apples we can ship in barrels to market, but garden truck not to any advantage as yet. We are too remote from market to make that department of horticulture available. This section is, strictly speaking, mainly agricultural, of which the chief market staples are wheat, rye, corn, and oats—some fruit. This valley is fertile, and beautifully situated, and its soil seems to be well adapted to almost any kind of fruit culture of this latitude, and I doubt not will ere long make this branch of industry more a source of profit than heretofore.

It does not seem proper to us to mix up the orchard and the truck-garden. This system of blending the two, and practicing a system of "double-cropping" may pay well in the vicinity of New York City, but would certainly not in this locality. Besides, we still maintain the opinion, that vegetables grown in open ground, and not under your low-trained trees, but under the proper in-

fluence of solar light and heat, will prove far more perfect and delicately flavored, than such as are grown by gardeners in shady places. We doubt whether the most "skillful" will deny this. Corn grown for "cooking" will illustrate this most "palatably." It is only when grown away from shady places that it attains its excellent crispy quality and delicate flavor; and this applies with equal force to most vegetables carried to market, the cultivation of which is found so profitable.

Light can not have the same influence upon the roots where the soil is annually disturbed to such a depth, by digging or plowing, where the fine rootlets, or spongioles, as some call them, must necessarily be broken off, to say nothing of the danger of barking the major bracing roots. The tree is in consequence compelled to send its roots to the *lower* regions for its supplies.

You say, "If root crops are robbers, so is your sward." So it is; but we do not assert that there must be sward—though fine it would be in appearance—but we do believe that plants usually grown by market gardeners are larger individuals than grass, and will require more air, more carbon, and consume more water than a few slender blades of grass, and hence more detrimental to our fruit trees, especially during dry autumns. (*Note*.—The pointed grasses will, especially after a thunder shower, also attract more electricity to the soil than cabbages or potatoes, thereby stimulating the soil, etc.)

Agricola is the older and Horticola the younger handmaid of the noble tiller of the soil. Intimately as they seem to be associated, they will yet hardly consent to become metamorphosed into one and the same being. Agricola is always too busy to concern herself much about the flowers of the other, while Horticola will not submit to have her fine, flower-wreathed head and bust fixed on the body of a horse or an ass, and hitched to a plow for agricultural operations among her fragrant fruit trees, for the sake of cultivating root crops, for some double-cropper. Such transmogrification was practiced of old, if we may credit their statuary, but has become obsolete now.

Your articles of faith in regard to "Orchard Culture" are admirable, only they have a little too much of the dig about them for this locality; otherwise we endorse them heartily.

The 18th article strikes us as especially good. You go for excluding "every unclean thing" from the orchard. This, of course, excepts the birds, young turkeys, and chickens. If one or two trees do become old and decayed, and fail to yield much fruit, don't chop them into fire-wood at once. If the trunk be hollow, it will afford a snug home for the owl and the wood-pecker; the former will be invaluable in ridding the orchard of such unclean things as rats, mice, etc., and the latter will feast on the borers and other unclean insects. Birds should be more encouraged about orchards.

It need scarcely be added that the writer is simply an amateur, a lover of the subject, and not practically one of the skillful market gardeners you were pleased to advert to. We fear it is often the case that those who dig least have the most say. Yet be assured that our conclusions have not been drawn hastily at all, but taken from personal observations.

We never doubted for a moment the sincerity of any of the editors of the *HORTICULTURIST*. Nay, we are certain it has done immense good in its several departments of pomology, floriculture, etc. It is, moreover, self-evident that it has been mainly a work of love and devotion, the reward of which can be better seen around many dwellings wherever this welcome journal of rural art and rural taste has circulated. Many beautiful flowers now bloom where before existed nothing but vacancy; fruit of improved quality has displaced inferior kinds; houses, when now building, are fashioned after models set forth in this periodical. In fine, it has awakened a general inquiry throughout the land, the fruits of which will become more apparent "when the sword shall be made into the pruning-hook," and when men, instead of killing each other, shall vie in handling, to the best advantage, this emblem of peace and prosperity.

(The labors of an editor must needs be arduous and difficult. It can hardly be expected that more than general rules can be laid down; it would be fallacy to enter into all the individual particulars of every locality. Every cultivator must here, as in every other pursuit, possess some adaptation and judgment of his own to enable him to operate successfully in his particular case.)

"The pen is mightier than the sword," is an old saw, and as we have never learned to handle the latter, and the former but imperfectly, we are apprehensive of getting the worst in continuing the controversy with an editor, who, as a matter of course, is expected to know every thing.

Be assured of our good wishes, and of many thanks for the honorable notice you were pleased to take of our imperfect article on Orchard Culture in the March number.

[Your article has made us very much your debtor. We dislike controversies; happily, there is no danger of one in this case, for there is really, it would seem, little or no difference of opinion between us. Our remarks about "double cropping" were not intended for the orchard. When an orchard is established we would exclude every thing of the kind. We certainly do mean manuring, liming, and the application of composts; but we do not mean destroying the roots of the trees. We will explain this very soon; for the moment we are so ill as to make writing painful. Thank you for your endorsement of our articles of faith. They contain nothing that we do not practice. The labors of an editor are arduous indeed; they are especially so when he is not well. We reciprocate heartily all your good wishes, and shall always be glad to hear from you.—ED.]

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## CULTIVATING ORCHARDS.

BY NOVICE, PLATTEKILL, N. Y.

MAY a plain farmer presume to suggest some exceptions to one or two of the almost unexceptionable articles on orchard culture, in the current number of your journal, page 94. In allusion to articles 17 and 18, I must dissent, on the score of pecuniary profit, from letting an orchard lie bare of all vegetation, save the little trees whose roots for many years are restricted to a far less area than that we allow them in anticipation of their future need. Article 15 says, "We believe in cultivating an orchard." I suppose the whole orchard, and so thoroughly as to eradicate all grass and weeds. So say I. And I as fully respond to the idea inferred in a query which I find on the 154th page of vol. 17: "But is it necessary that the wide space between the rows of vines (trees) should be given over to idleness during two or three (10 or 12) years?" in view of the fact, that 500 bushels per acre of roots could be grown thereon, with but little more labor than would be

requisite to keep down grass and weeds. The trees, the meanwhile, growing quite as fast as should be permitted, if the root crop were manured, considering the liability of rapidly developed trees to "winter killing," etc., as per article 28.

Some little experience, and forty years' observation, have convinced me of the possibility of plowing an orchard without incurring the disastrous effects your correspondent, P. J. Bertolet, deems inseparable from the practice, "just as sure to cripple and kill as a raking fire of cannon is to destroy a body of infantry," page 89.

Many years ago I concluded to dispense with plowing a young, bearing orchard, and so stocked it down with clover and timothy; but before many years discovered that my trees were fast going dead, and that something more than top-dressing must be resorted to. Not wishing to hazard too much, I plowed up half an acre and planted it with ruta-bagas. The result was, I could,

before autumn, count every tree on the plowed part, at a quarter of a mile's distance, from the deeper green of the foliage. Since then I have alternated grass, grain, and and root crops regularly, as on my other fields, while never a tree has been killed or seriously injured by the practice. But I would advise all fruit-growers to dispense with the grain crop, as my former experience argues against it. And as the tree roots extend and occupy the ground, restrict the limits of the root crops proportionately.

The editorial remarks upon P. G. Bertolet's essay appear to me perfectly rational; but there is a point, considered by your correspondent of vital importance, which I would be pleased to see a little more clearly elucidated. Laying no claim to critical knowledge of the laws of vegetable physiology, I am at a loss to comprehend how solar light operates upon the roots of trees, immured, as they naturally are, in earth; a substance so entirely impervious to that easily intercepted agent, that a covering sufficient to secure moisture to the roots, is sufficient to exclude any perceptible amount. And if, in addition, a covering of grass or mulch interposes, their chances of sunlight, if beneficial, seem to me slim indeed: while still the genial warmth attendant upon sunbeams, undoubtedly permeates the soil to a considerable depth, and produces the effects, for ought I know, ascribed to light.

Your correspondent asserts, (and may be correctly,) that the proper elements must first be eliminated, (as near as I can read him,) in the roots, by the agency of light, before they can be converted into Bartlett's and Pippins. I am at a loss to understand the intended application of the word eliminate. Webster defines it, to thrust out, to expel. Thus defined, his remarks seem to me obscure. I may, of course, expose my ignorance, but no matter, if thereby it be corrected, when I say that somehow I had imbibed the idea, that the functions of the roots, other than that of a support to the tree, are, to absorb from the soil the elements of which the tree, every part of it, is

constituted, mineral and organic, in a condition of aqueous solution, which, through their sap vessels, and those of the trunk and branches, is elevated to the leaves, where, through the agency of light, warmth, and atmospheric air, the elements are assimilated, and flowers, fruit, bark, woody fiber, etc., are each supplied with its respective aliment through pores adapted to the transmission, after the proper consistency is attained by evaporation in the leaves. But do not the roots of a tree absorb some extraneous elements combined in solution with its appropriate food? What becomes of this? is it conveyed back to the roots, and by them thrust out, expelled, eliminated, and is light necessary for the exercise of this function?

With respect to the potato, it seems to me that friend Bertolet is wide of the mark, if he has any idea that light admitted to the roots or tubers has any thing to do with correcting its native deleterious properties. We farmers know too well the effects of sunlight upon the tubers to make even the presence of our favorite Bramahs in the plantation permissible.

I should regret to occupy any space unprofitably in your deservedly popular journal, but thought if I could elicit some few remarks on the influence of light in general, in the vegetable economy, and on the roots in particular, from so reliable authority, it might be interesting to more than one Novice.

[ "Plain farmers" may always make suggestions; indeed, we very much like to have them do so. The wide spaces between the trees may certainly be used while the orchard is in process of formation; only be careful not to crowd on the roots of the trees. The quotation you make from former remarks of ours is quite applicable here. Narrow the space from year to year, and finally give up the ground entirely to the trees. Read Mr. Bertolet's article in the present number. If you read solar heat for solar light, the subject will be clearer. But as Mr. Bertolet is a man of science, we will leave him to explain his

meaning. We will speak afterward, if necessary. We will only say now, that you have a very good conception of the subject.

The style and manner of your article are such that we hope we may often hear from you.—ED.]

## THE PROPAGATION OF THE DELAWARE.

BY HORTICOLA.

Nor only Dr. Grant, but a great many other cultivators of the Delaware, say that it is difficult to propagate it, and had not an accident taught me the contrary, I should think so now myself. My former experience had corroborated the assertions of the vine propagators. It is true that *layers* of the Delaware grow easily enough, but it is equally true that cuttings, as well as single eyes, root with difficulty when treated in the usual way; they require unremitting care and attention, and extraordinary arrangements. That I lost, last spring, four hundred and ninety-five eyes out of five hundred which I had planted, and that only five lived, would certainly not prove the point. They were twice left to their fate during an involuntary absence from home which I could not avoid; for hardly any other plant, except perhaps a Cactus or an Aloe, would have endured what the eyes of the Delaware were destined to suffer.

After I had prepared the five hundred eyes mentioned above, I had sixty-eight left which I was unwilling to plant. I threw them into a basin full of water, after I had cut them in pieces of two eyes each. The lower cut was made close under the eye, the upper one about an inch above the eye. So they had lain in the water several weeks. At last, in the first week of April, I happened to see them again, and I at once concluded to plant them in the open air, believing then that the number of plants from the eyes would, at all events, surpass my most sanguine expectations. It was, of course, natural that I should have been unwilling to bestow any more care upon cuttings. They were planted in a bed of stiff clay without any further preparation, but so deep that the upper eye was about an eighth of an inch below the ground. Not long after I noticed that they were send-

ing forth young shoots and leaves. I did not, however, pay much attention to this fact; for I expected with certainty that they would die one after another. This being not the case, I pulled one of them up, and found, to my great surprise, that it had a large number of fine roots. I planted it again, and watered and shaded it a little, which had the effect that it continued growing. Last fall I took them up and heeled them in, because I feared that the frost might injure them, as that part of my garden where they had been planted is very wet on account of a rock which, in the form of a narrow ridge, stretched across it. Those sixty-eight eyes gave me without any trouble thirty-four very superior plants.

Last fall I planted six or eight hundred cuttings of the Delaware, the Diana, and a great many others kinds, and covered them up a little, induced by Mr. Fuller's advice. Next fall I shall faithfully report the results obtained. Mr. Fuller has, as the Editor of the *HORTICULTURIST* once wittily said in one of the meetings of the Brooklyn Horticultural Society, "a very sharp knife, with which he cuts every thing and every body," but he cuts, like a faithful surgeon, not to cause pain, but to heal. I feel that I am under much obligations to him for his frank statements of many secrets, so called, the keeping of which, or at least the endeavor to do so, belongs to times past. Not long ago a man hesitated to explain to me his method of cultivating the *Primula sinensis* as successfully as he pretended to understand it.

[Horticola, we know, is very fond of experimenting, and when he discovers a good thing, immediately calls in his horticultural friends and neighbors to enjoy it with him.



His experiment with the Delaware is very interesting; we hope he may repeat it with even greater success. Many of our readers will no doubt try it at once. There is danger, in leaving the eyes in water too long, that they

will rot. It is the hardness of the wood of the Delaware which makes it so difficult to propagate it in the usual way. When placed in a warm, moist heat, it roots readily enough. Do let us hear from you again, Horticola.—Ed.]

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## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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THE CRAIG MICROSCOPE.—We had left on our table a neat and compact microscope, invented by Mr. Craig. We have been testing it with a great deal of satisfaction and pleasure. Having but one object-glass, it requires no focal adjustment; and yet it magnifies about 10,000 times. There is no end to the amusement it will afford both old and young. We can think of scarcely any thing that will yield more pleasure of an evening in the social circle. The wonders of nature become still more wonderful when viewed through the medium of this powerful little instrument. But to the botanist, and all who take delight in studying the minutiae of the natural world, it has a peculiar value. It can be carried in one's pocket, and is always ready for use. Its low price puts it within the reach of all. It may be found advertised in our columns.

THE CULTURIST.—This is a new candidate for public favor, to which we extend a cordial welcome. It is devoted to the farm, the garden, apiary, poultry yard, rural architecture, and the fireside. It is a quarto of 12 pages, and is edited by A. M. Spangler, formerly of the "Farm and Garden." The subscription is only twenty-five cents a year. We have seen but one number of the *Culturist*, and the contents of that are varied and good. As Mr. Spangler has been in the traces before, we may conclude that he will

make the *Culturist* a good thing, if properly sustained, as he ought to be. We wish it much success.

WINTER PEARS.—We are very greatly indebted to Messrs. Ellwanger & Barry for a box of winter pears, containing *twenty* varieties. They are in splendid condition. We append the names of them: Beurré Stoeppert, Black Worcester, Gros Colmar, Sagaret, Suzette de Bavay, Bezi de Veterans, Colmar des Invalides, Prince's St. Germain, Cadette de Vaux, Great Britain, Beurré Duhaume, Haddington, Chaumontel, Tarquin, Leon le Clerc de Laval, Hericart de Thury, Reading, Bezi d'Esperin, Beurré Leon le Clerc, Willermor. Up to the present moment (April 17) only two, Suzette de Bavay and Willermor, have ripened, and they are very good. There has been a loud demand for good winter pears, and a successful method of keeping them. These requirements are here met. There is a case in point, also, of a gentleman who recently sold a barrel of Vicars in New York for the nice sum of \$30. We do not know how Messrs Ellwanger and Barry kept these pears, but hope they will inform us. We have kept them very successfully in barrels in a cool, dry cellar, very much as we do apples. We shall prepare portraits and descriptions of the newer kinds of these pears, and lay them before our readers.

DAHLIAS.—We received from our Balti-

more correspondent, too late for our last number, the following additional remarks on the Dahlia. They will be very interesting to Dahlia growers :

"It may not be inappropriate to make the following addenda to the remarks on the Dahlia in the February number of the *HORTICULTURIST*. They are copied from the 'Florist and Pomologist,' London, February, 1863, and are written by John Keynes, one of the leading Dahlia growers in England.

"Last year the best flower was Lord Derby. I consider this the best self Dahlia I have ever seen. There is a white of very first-rate quality in Miss Henshaw, and a dark variety in Donald Beaton; these, with Lady Elcho, Delicata, and Bob Ridley, comprise the six best flowers of the year. The next best six flowers are Goldfinder, Empress of India, Cygnet, Imperial, Gen. Jackson, and Model. There are six others which, although second class, will be useful for a season or two, namely, Black Prince, Countess Portsmouth, John Warren, Mrs. Bush, Capt. Harvey, and Handforth Hero.

"Fancy flowers are very few in number. Mrs. Crisp and Reliance are the only two that will stand the test. There has been a great deal said about amalgamating the fancy flowers with what are termed the show varieties. Now, I think the best division would be, the best twenty-four self varieties, and the best twenty-four striped, tipped, edged, or shaded; this would make two distinct classes, and prove very attractive.'

"He concludes with the following list of the new Dahlias for 1863, placed according to his own idea of merit, which perhaps is worth copying, to see if time will verify his prediction.

"Charles Turner, (Keynes;) Caractacus, (Turner;) Count Cavour, (Edwards;) Serenity, (Rawlings;) Lord Wiltshire, (Dodds;) Mrs. Hogg, (Rawlings;) Lord Dundreary, (Turner;) Lord Russell, (Silver;) Princess Alice, (Edwards;) Bellona, (Harrison;) Charlotte Dorling, (Turner;) Mrs. Hobbs, (Hobbs.) These twelve are the cream of the show flowers for this season.'

"*Fancy Flowers*.—There are six, I think,

very first rate, namely: Patent, (Keynes;) Countess Shelburn, (Turner;) Mrs. Wickham, (Rawlings;) The Bride, (Rawlings;) Symmetry, (Legge;) The Beau, (Rawlings.)'

"All these,' he continues, 'will give satisfaction to every buyer. I hope next season will prove more prolific in good things. I bloomed 35,000 seedlings, and have hope of something good.'

*March 24th, 1863.*

THE ASPARAGUS BEETLE.—We last month briefly alluded to the interesting discovery of Mr. Marié, that this beetle passes the winter in the imago or perfect state, concealed under the bark and among the moss of trees. This fact is contrary to the popular belief, but places the destruction of this beetle within the reach of all who will take the trouble to seek him in his hiding place. We visited Mr. Marié before he had completed their destruction, and had an opportunity of seeing the conditions under which they were found. They huddle together in masses under the loose bark, and also among the thick moss adhering to the trees. This enables one to kill numbers of them as it were at a single blow. They do not seem to be particular on what kind of tree they seek shelter, for quite as many were found on the Red Cedar as on the Hickory or Oak. We meant to have looked for them among the old stalks lying on the Asparagus bed, but forgot to do so; but we should not probably have found them there. We regard Mr. Marié's discovery as a very interesting and important one. It is singular that nobody should have made it before. We trust that such of our readers as reside within the district covered by this beetle will take advantage of this discovery, and begin the destruction of the insect at once, before it has spread farther. As far as we can learn, it is at present confined to New York Island and a portion of Long Island. We have no knowledge of its having passed the Harlem River and we trust it will be destroyed within its present limits. If it is left to itself, the destruction of Asparagus as a luxury for the table is quite certain, if we are to judge from the effects already produced by it.

A CHEAP PAINT.—In these times of high prices, any useful thing that is really cheap will be sought for with avidity. We therefore take pleasure in laying before our readers the following account of a cheap paint received from John Sill, Esq., of Cedar Hill, Albany County, N. Y. Mr. Sill has used it extensively, and speaks from his own knowledge. His own house, a very large one, was painted with it seven years ago, and the color is now as good as when put on. The following is Mr. Sill's account:

"The cheap paint, or, rather, the cheap substitute for paint used by me is very simple; and after several years' experience, I am of the opinion that for certain kinds of outside work it is superior to oil and lead. You make and use it as follows:

"Take the common *yellow* water lime (or cement) such as is made at Manlius, N. Y., and is sold by Mr. A. A. Dunlop, of Albany, for about two dollars per barrel. Put in a common pail about three quarts, mix it with cold water till about the consistency of cream, add a small handful of fine salt, keep it well mixed, and your paint is ready for use. It can be applied with a whitewash or paint brush. I prefer the latter, selecting a large one, because it can be more evenly and neatly applied.

"This paint can only be used with success on outside brick or stone work. For the country, where the buildings are exposed to the full force of sun and rain, it will outlast any oil paint ever used. In fact, it is indestructible, preserving to the last its original color, which is a handsome yellowish drab.

"In applying it, choose, if possible, a cloudy damp day, so that the cement will set before the water is exhausted, which will be the case at once if worked in a hot sun. In the end, however, it will not make the least difference, because each rain storm that comes sets the cement harder and harder till it becomes like stone itself. Therefore, don't be alarmed, if, after being put on and dried, you can brush it off like dust; let it alone; a short time will make it stone. You can change the color if desired, by using a portion of the

brown (or Kingston) cement. I have used the latter for painting the stone bases, &c., with good effect.

"A new brick building requires two coats. It will then remain perfect for many years. I first used it in 1857, on an old-fashioned house, and it is to-day as perfect as when first put on. Its cost, you see, is a mere nothing, one barrel of cement being enough for two coats on a large building."

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THE PHANTOM BOUQUET: a popular Treatise on the Art of Skeletonizing Leaves and Seed Vessels, and adapting them to Embellish the Home of Taste. By Edward Parish, Member of the Academy of Natural Sciences of Philadelphia, etc.—Our readers may remember that about a year since we described a beautiful vase of skeletonized leaves exhibited in Brooklyn by Mr. Platt. The process of forming these very interesting objects is described in the little manual before us, in plain and simple words that all can understand. We hardly know of any more beautiful ornament for the mantel or parlor table, than a vase or bouquet of skeletonized leaves. By a process of maceration, the cellular tissue is all removed, and nothing is left but the midribs and veins. These are then bleached, and we have something which may very well be likened to lace work produced by fairy hands. We commend the work most heartily to all, but especially to our lady friends. It is published by J. B. Lippincott & Co., Philadelphia.

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A WELL-RESTOWED HONOR.—The proceedings of the Massachusetts Horticultural Society have of late been peculiarly interesting. At the last election, Mr. Hovey was elected President. At the last meeting the late President, Mr. Breck, received the testimonial of an elegant silver pitcher and a dozen silver forks, and Mr. Rand, chairman of the Library Committee, received an award of \$100 for important services rendered in his official capacity; but the most interesting ceremony of all was the presentation to the Society, by Mr. Whitmore, of a fine mar-

ble bust of the Hon. Marshall P. Wilder. We very heartily congratulate Mr. Wilder upon this well-deserved compliment. We know of no case in which all the parties have been more equally and happily honored. We can conceive the whole ceremony to have been a very touching one. But in a case like this Mr. Whitmore is entitled to speak for himself, and we publish his letter entire, as also the proceedings which took place after the reading of the letter, as they appear in a local paper.

Boston, March 31st, 1863.

CHARLES M. HOVEY, Esq., President of the Massachusetts Horticultural Society:

DEAR SIR,—I have placed in the hall of the Massachusetts Horticultural Society a bust, by Henry Dexter, Esq., of Cambridge, of our valued associate, the Hon. Marshall P. Wilder, and offer it for the Society's acceptance. In thus preserving the portrait of one whose labors have so long been freely devoted to the interests of our Society, it seems proper to recall the variety and extent of his services.

For more than thirty years Col. Wilder has been connected with this society, and has not only given liberally of his money, but has devoted his time and influence to the furtherance of its objects. Beginning at a time when the importance of such a society was not appreciated, and its objects seemed almost visionary, he has seen it gradually rising in public estimation, and exerting a constantly increasing influence among the land-holders of New England. He has seen the fruit of that influence in the taste which embellishes the residence of the wealthy—in the enterprise and intelligence which have elevated the position of the farmer, and in the improvement of every branch of husbandry which has so grandly increased the national wealth.

While the society has been the inciting power of these important movements, it has been compelled to struggle with the difficulties attendant upon all pioneer enterprises. Its friends may at times have been discouraged, its means have been curtailed, and its prospects obscured. Col. Wilder has deserved the thanks of the society for persevering in its support, and in one instance at least—the case of the Mt. Auburn Association—for having made such wise and prudent arrangements as have secured a permanent fund for its purposes.

I need hardly add that Col. Wilder's connection with this society is not his sole claim to public distinction. He has repeatedly been called upon to occupy offices of trust and responsibility, and has ably discharged the duties devolved upon him. As a merchant he has given a notable example of integrity and ability, and his personal character needs no encomium from us, who have been intimately associated with him. The particular interest, however, which Col. Wilder has always evinced in the success of this and kindred societies, renders this a peculiarly fitting place to present such a memorial. I have therefore to request you, in behalf of the Society, to receive this bust, and to assign it a fitting location, in order that it may remain surrounded by the emblems of the pursuits in which he has delighted, as a memorial to us and our successors of our appreciation

of the character and labors of Marshall P. Wilder; and wishing, my dear sir, that your administration may prove as fruitful of good to the society as have those of your predecessors, I remain yours faithfully,

(Signed,)

C. O. WHITMORE.

"The bust was then uncovered by the Librarian, and was received with hearty applause.

"Mr. Leander Wetherell, of Boston, then asked leave of the President to read the following resolutions, which he desired to offer for the consideration of the Society, which was granted:

"*Resolved*, That, the members of the Massachusetts Horticultural Society gratefully accept this appropriate gift of C. O. Whitmore, Esq., and we do hereby tender to him their cordial thanks for his most generous, tasteful, and elegant donation to this Society.

"*Resolved*, That, as members of the Massachusetts Horticultural Society, we are highly gratified in being able to add to our valuable collection of ornamentations, so fine a marble bust of one who, for more than thirty years, has been an active member, patron, friend, and constant benefactor of our Society; for eight years its President, in which time, Horticultural Hall was built; to whose conservative, conciliatory, and wise influence the Society is largely indebted for that amicable settlement with the Mount Auburn Cemetery Corporation, from which a large income has already been received, and by which a perpetual revenue is to accrue to its funds; nor would we, as members of this Society, be unmindful, that in thus honoring our own fellow-citizen, we are paying deserved homage to one who has richly earned for himself a national reputation by serving the United States Agricultural Society six years as its efficient President, and also as President of the American Pomological Society for the last twelve years, which office he still fills.

"The resolutions were adopted by a unanimous and cordial vote."

HOLLY'S COUNTRY SEATS.—This is a new work, containing lithographic designs for cottages, villas, mansions, etc., by Mr. Henry Hudson Holly, of New York. In a new

work on architecture at the present day we ought to look for some large degree of freshness and originality, either in design or construction; the designs at least, so far as good taste is concerned, ought to fully equal the best of those already before the public. In this respect, the work before us does not equal our wishes. The brief account of the history of architecture is interesting and well written, and the introductory chapter is to the point. Of the designs that follow, some are very good, others are awkward and far-fetched, and others, again, are open to criticism either in design or detail. The bird-house finish to the chimneys, and the puny little dormers stuck all over the roofs, strike us as being in very bad taste. Several otherwise good designs are absolutely spoiled by forcing in needless accessories of this kind. Carrying the chimneys up on the outside of the house, especially in such designs as No. 24, we conceive to be in bad taste and to be avoided as much as possible. We mention these things with the hope that Mr. Holly will avoid them in his practice. We should have been better pleased with the book if some portion of it had been devoted to the details of interior work. In other respects the book is a very readable one. It is published by D. Appleton & Co., New York, and is very handsomely printed on good thick paper.

ORCHARD CULTURE AND THE GARDENER'S MONTHLY.—Some remarks in response to the *Gardener's Monthly* are crowded out this month, our practice being to omit our own matter when pressed by correspondents. We wish to say, however, briefly, that our article in the February number was intended partly for our cotemporary, and partly for others who had failed to understand our position. There were two passages in the first article in the *Gardener's Monthly* at which we felt hurt, and which seemed to us not characterized by that fairness which we had always found in our cotemporary; but we are now satisfied that nothing of the kind was intended. We shall avoid all such

conclusions hereafter. We need hardly say that we reciprocate very heartily all the kind expressions in the last paragraph of our cotemporary. We may feel hurt, but we shall not easily be offended.

#### CATALOGUES, Etc.

*H. Southwick & Son*, Dansville, Livingston Co., N. Y.—Wholesale Catalogue of the Livingston Nursery, for Autumn of 1862 and Spring of 1863.

*J. A. Bruce & Co.*, 46 King street, Hamilton, Canada West.—Descriptive Catalogue of Seeds for the Farm, the Kitchen Garden, and the Flower Garden. Twelfth edition. 1863.

*T. C. Maxwell & Brothers*, Oldcastle Nurseries, Geneva, Ontario Co., N. Y.—Descriptive Catalogue of Ornamental Trees and Shrubs, Roses, Bedding and Border Plants, Bulbs, etc.

*Thomas Morgan*, Stamford, Conn.—Annual Catalogue of Trees, Plants, etc.

*A. S. Fuller*, Brooklyn Nursery, Brooklyn, L. I.—Descriptive Catalogue of Small Fruits, and Ornamental Shrubs, Plants, and Vines.

*T. C. Maxwell & Brothers*, Geneva, Ontario Co., N. Y.—Descriptive Catalogue of Fruit Trees, Plants, and Vines, cultivated and for sale at the Oldcastle Nurseries.

*J. Knorr*, Pittsburgh, Pa.—Price List of Small Fruits, etc., for the Spring of 1863.

*J. M. Thorburn & Co.*, 15 John street, New York.—Annual Descriptive Catalogue of Flower Seeds, with Practical Directions for their Culture and Treatment. Also, a List of Beautiful French Hybrid Gladiolus.

*Andrew Bridgeman*, 878 Broadway, New York.—Descriptive Catalogue, No. 6. New and Select Bedding Plants, Roses, etc.

*W. Brown Smith*, Syracuse Nursery, Syracuse, N. Y.—Descriptive Catalogue of Fruit Trees, Vines, Plants, etc. Also, Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, etc.

*John W. Adams*, Portland, Me.—Catalogue of Fruit and Ornamental Trees, Evergreens, Grape Vines, Roses, etc.

*Washburn & Curtis*, (late Barnes & Washburn,) Harrison Square, Mass.—Catalogue of choice Flower Seeds, selected from the Stocks of the most celebrated European and American Growers. To which is appended a Supplementary Catalogue of Flower Seeds for 1863.

*H. A. Truax*, Rose Hill Nursery, Lyons, Iowa.—Catalogue of Fruits and Grape Vines,

Dwarf Fruit Trees, Strawberries, Raspberries, Currants, Evergreens, Roses, Shrubs, etc.

*D. F. Kinney*, Rock Island, Ill.—Catalogue of the Black Hawk Nursery.

*Joseph H. Hargis*, Lagrange, Mo.—Catalogue of Fruit and Ornamental Trees, and Plants.

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## CORRESPONDENCE.

MR. EDITOR,—*Dear Sir*:—Our mutual friend, "Fox Meadow," appears to be determined to have me out in his controversy with Mr. Bright, of Philadelphia, respecting inside, divided, detached borders, in which to grow the exotic grape vine under glass. In your last issue, the former gentleman, after alluding to his knowledge of the place where I was employed "when a lad in the teens," says: "In this dear old place, some years after friend Chorlton's boyish days were past, we saw there an inside, divided, detached border." Now, if Mr. Fox Meadow had been a fellow-apprentice along with your humble servant at that time, he would have had to lift up and heave over many a three-gallon can of, not only clear water, but good old odorous dung-hill drainings, to supply the ever-craving and hungry rootlets of the vines planted therein; and he would know also that these vines were cut down, each alternate one, exactly as friend Bright has so ostentatiously spoken of as being original with himself. This set of vines, however, were not intended as a permanency, but simply to make up for short crops otherwise, and afterwards to devote the compartments to other purposes in plant-growing. So far the expectation was realized, and the vines, after some two or three crops, (each alternate vine being allowed to bear,) were removed. This is only one simple example of thirty years or more now gone by, but I could refer to others, if it were necessary, to prove that Mr. Bright has not yet found out any new fea-

ture in grape culture. All his visionary theories, "special fertilizer" included, are all "bosh," and, as you say, we may put them into one grave, and bury the "errors with the past," and let old experience go on his way saying, there lies a batch of mistakes. Before consigning them to the tomb, however, let us say a word or two in further explanation. When Mr. Bright first heralded his new plans before the public, he did so with such a flourish of words and empty boast, as to make any sensible horticulturist think he could do no harm, as the pedantry could be easily detected. It appears, however, that all the fools were not dead, and some of them, I believe, have had to "pay the piper." Speaking for myself, I concluded the best thing was to let bombastic error alone, because, when this noisy "critter" is aroused, you can get no sound argument out of the opponent, but have generally to submit to abuse in lieu of reasonable demonstration. This submissiveness, however, does not hold good under all circumstances, and as "Fox Meadow" is now compelled to act on the defensive and crack the nut Mr. Bright has given him, I would advise the latter gentleman to stand from under, or the former may in future bring forward some other experience to bear upon the subject, besides being in possession himself of a very heavy demonstrative hammer, fixed into a handle of long practical observation. If Mr. B. had not been scared out of the woods by the owl too soon, but had sensibly stayed until he

had thoroughly examined how easily the decomposing leaf-mould, as it is acted upon by *Nature's* chemistry, cracks the hard hickory, succors it while a young plant, and maintains it as a large tree in after years, he would never have put that question.

Allow me to say, in conclusion, that all Mr. B.'s excuses and quotations from scientific authors, will not enable him to prove that leaf-mould or carbonaceous soil, when properly applied, is unsuitable for the grape vine, or that it is more productive of *injurious* fungi than any other materials which he himself recommends; neither can he prove that he has so far shown up any thing new; that his divided, detached, inside borders are original with himself, or are calculated to be any thing more than equal to a tub or large pot, in which grapes were grown before he was born; that his cutting down system was not previously practiced, or that his "special fertilizer" will accomplish as much good as either dung-hill drainings or diluted guano. Yours most respectfully,

WM. CHORLTON.

*New Brighton, S. I., March 9th, 1863.*

[Mr. Chorlton's letter was in type last month, but was unavoidably omitted. We are glad Mr. Chorlton has for the moment shaken off the lethargy to which he had apparently surrendered himself; if for no other reason, at least to show his professional brethren that he has not yet rusted out. Mr. Bright will have his hands full in defending himself against so many opponents. We have heard that he is fond of a good "lively time;" and he seems now to be right in the midst of one, "home-brewed." We shall take care that he is not too much crowded.—Ed.]

ED. HORT.—It would be quite a favor to some of us *in the country*, could we tax the not *very reliable article*, called *patience*, of our "city friends," to tell us the real value of "Bright's Grapery Border." Be it old or new, is to us of little moment. Is it reliable? is every thing to us. "Fox Meadow," Mr. Saunders, and others, seem to have

opinions quite adverse of others. "Fox Meadow's" objection, that the border can not be kept wet, has no more truth, than that a pot in a house can not be kept wet with a rose or geranium in it. The quantity of water being known, it can be given, and will run through, when more than that, into the drainage below, say what he will. Now I do not know the best mode of pot culture of grapes; but I can not dispute, that there are those in England and America that do know, and do succeed. And "the detached and divided border" is a pot of large dimensions. If vines will succeed in a small pot, they will in a large one.

All I know of "divided and detached borders" is founded on a house twenty-two feet wide and one hundred feet long; another twenty feet wide, forty feet long; and the occasionally seeing two others. Experience in these shows, 1st. That the border dries easily, but can be kept wet, and controlled easily. 2d. That they are frozen easily, and the roots are liable to be so injured that the vines will not bear well, if at all, for a year or two in consequence. Hence, they must every winter be coated with manure, and the chambers closed, to exclude all chance of frost. 3d. The dryness of the border, in winter, may injure the vine roots. 4th. The care is greater than that of the common "winter" border.

Against this are the facts, 1st. That the fruit is excellent. 2d. That it is well colored. 3d. It is early, and 4th, It keeps remarkably long on the vines. 5th. Fruits that can not be ripened in a *cold* vinery, will ripen in the "divided and detached" border.

But these houses I speak of have not been long enough in use for me to know how long they will last. They certainly can be made to do well in a few years. How long, I don't know.

I am very suspicious of the system, as Mr. Bright is so very ungentlemanly as not to answer my letters of inquiry, in which I told him that I was about to publish an article, and did not want to commit myself to a proven failure, if his plan was such.

Please let us know the truth, as "the ice is now broken" with Mr. Bright.

Yours, &c., S. J. PARKER.

*Ithaca, Tompkins Co., N.Y.*

[When Mr. Bright's work appeared we took occasion to show that his idea of an inside border was not original with himself. At that time we had not seen one of his borders, or our article would have been penned somewhat differently. Having seen them since several times, at Mr. Bright's and elsewhere, and examined them closely, we can speak of them somewhat understandingly. Mr. Bright's borders are raised above the floor of the house; they are detached from the sides of the house; and they are divided into small compartments. They are, in short, as you well represent them, simply large pots. A good idea of them may be had from the illustration in Fox Meadow's article last month, except that Mr. Bright's (at least those we have seen) are much more shallow; too shallow, indeed, for the purpose intended. They are, then, equivalent to pots, producing about the same results, and, so far as growing grapes is concerned, possessing about the same advantages and disadvantages as pots. We think you have stated these very fairly. There are very few people who are willing to give up a large house exclusively to growing grapes in pots, or divided and detached borders; if there are, they can very much improve them. The inside border we make is quite different from Mr. Bright's; it is made in the usual way, but the whole interior of the house is given to it; there are no divisions or detachments, but we often build the foundation walls hollow, and would always do so where the small additional expense is not an object. They have been in use a good many years, and we know of no case where they have failed to give satisfaction. The grapes ripen earlier than they do in an outside border. An inside border of this kind answers well for a forcing house. The inside, divided, and detached border will not prove lasting, on account of its size; that is to say, it will have to be renewed every few years. To this extent it is reliable.—Ed.]

EDITOR HORTICULTURIST:—I have read the model report of "Pratiquer," in the December number of the HORTICULTURIST, with much interest, as I am a lover of good grapes. I have tried, years since—as have many other persons in this county—the Isabella, and failed to ripen it, with ordinary exposure, in a large per centage of seasons; so large that it has been generally abandoned. A few persons, in warm localities, with severe pruning, obtained "*colored*" fruit, and *called* it ripe; and by adding to it a large proportion of the saccharine flavor supplied by "Our Own Raising," made it palatable. Recently we have been told that the Concord, the Delaware, and a dozen or two other kinds, were not only excellent in flavor, but from 10 to 20 days earlier than the Isabella. Hope brightened. Our mouths began to water. Vines were purchased, in hundreds of instances, and have been out, some one, some two years, are now under their winter covering, but they were put to sleep with cheerful expectation that another season would give a *little* fruit. But judge of our surprise, our dismay even, to find Pratiquer, in a list to which he prefixes the remark, "I shall take them in the order of their ripening," placing the Concord later than the Isabella or the Catawba. Of seventeen kinds mentioned, the Isabella being the fifth, the Catawba the sixth, and the Concord the eighth, our dear Delaware—for such has been the encomiums bestowed upon her, that we had truly fallen in love with her, without a personal introduction, in the fervor of one sweet kiss—is the seventeenth, the latest of the whole tribe. If so, there is no hope for her in this county. Tell me, kind sir, is this so? What does all this mean?

BERKSHIRE.

[In the article of Pratiquer alluded to, there is the seeming contradiction alluded to; but it is only seeming. We can explain it very easily, but prefer to let Pratiquer do so himself. In the mean time, you can comfort yourself with the assurance that your Delawares will all come out right. Pratiquer kept the "best till the last," not because the Delaware ripened last, but because it was the *best*.—Ed.]



THE  
HORTICULTURIST.

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VOL. XVIII.....JUNE, 1863.....NO. CCIV.

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Hints on Grape Culture.—XXVI.

WE propose to add a few additional remarks on the subject of spurs. It may not be out of place to explain why the system of spurring just described, is not only productive of more and better fruit than the short spur, but is more readily replaced in case of accident. The explanation is briefly as follows: By allowing two shoots to grow, an increased channel is formed for the elaborated sap, and it is consequently laid up, as it were, in greater quantity, not only for present, but future use, and just at the point where it is wanted. The second and third buds are always better developed than the base bud, and produce better fruit. Starting the base bud in connection with the third bud, has the effect of developing an increased number of buds at the neck of the spur; and though these are rubbed off, they will start whenever it becomes necessary, for any reason, to cut the spur down; but this would not be the case if these base buds were cut out, for in that event the germ would be destroyed, instead of becoming merely dormant. For this reason, a vine, however old, may be cut down to within a foot or so of the ground, with the certainty of developing dormant buds. The shoots thus produced are in the nature of "water shoots," and will not bear fruit the first year, not-

withstanding a recent writer has stated that they will. On this point, our own experience agrees with all good authorities who have written on the subject. The rule is a general and a good one. The reason is apparent enough in the fact that there have been no leaves to elaborate the sap. If, during the preceding year, there should have been a small shoot growing at the point from which the so-called "water shoot" proceeds, there is just a possibility that the latter may produce a small bunch of grapes, but not otherwise. To explain this fully, would require more space and time than we can give to the subject at present. It will be apparent, therefore, that in the elaborated knob at the base of the spurs, furnished as it is with dormant buds, we have a pretty certain means of renewing a spur, whenever it may become necessary. Growing two shoots instead of one from a spur, or, in other words, double spurring, agrees best with the constitution of our native vine, if we may be allowed the expression. We think it will accord with the experience of those who have had most to do with the native vine, that confinement within very narrow limits, in connection with close pruning, has a tendency to produce weakness, barrenness, disease, and a short

life. That has been our experience. We have found that close spurring, for example, in a few years results in the production of weak shoots, small bunches, and the running out of the spurs, it being almost impossible to renew them, and it is only at the extremities of the vine that we can look for fruit. In this case, in trying to subdue the native vigor of the vine, and make it subservient to our purpose, we make use of too much violence, or an excess of means; nature resists stoutly for a time, but finally succumbs, entirely exhausted, however, and our purpose is defeated. Something must be conceded to the nature of the vine; we may then do almost what we please with it, so pliable is it. We have succeeded best in this by the double shoots, and our "safety valves," the latter being the two middle shoots that grow unrestrained. In this system the vine is kept within limits, and yet is not altogether restrained of its native vigor. That system is best which so trains the vine to fruitfulness while it is young, that it will not depart from it when it grows old.

We may as well here explain the short-spur system to the reader. After the explanation given in our last number, it will be easily understood. We will take a spur at the beginning of its formation; in other words, as it appears on the arm at the end of the third year of the vine's existence, but the first year of the spur. Fig. 1 rep-

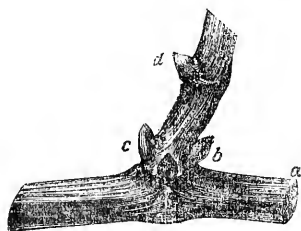


FIG. 1.

resents it as already pruned. It will be seen that it is cut at the first bud, *d*, above the base. This is the usual practice. All the other buds should be rubbed out. The spur might be cut at the buds *c* or *b*; but in

that case it would sooner run out; besides, the fruit would be less abundant. The treatment of the shoot proceeding from *d*, differs in no respect from that already described.

Let us next look at the bud as it appears the next year. Fig. 2 represents it as pruned

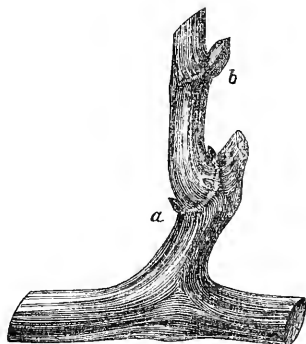


FIG. 2.

ed. The base buds<sup>at a</sup> are to be rubbed off; they will be found to be quite small. The bud *b* is to produce the fruit. The following year, again, the spur will be pruned to the first bud above the base, and so on from year to year. It will be seen that by this system the spur increases an inch or so in length each year. This would be no serious objection, provided the spur could be easily renewed, and provided, also, the results obtained were as favorable as in the case of the double shoots; but neither of these conditions obtains. The system, however, is more simple, and involves less labor than the long spur and double shoots, but is by no means to be preferred, the latter seeming to suit much better the nature of our native vine, which is somewhat impatient of restraint, some kinds, of course, more than others. We have sometimes combined the two; that is to say, alternated the double and single spurs; but we prefer to have them all double.

Recurring again to Fig. 6, (p. 139,) in our last number, we wish to add a few words. When an old spur is cut down, the number of dormant buds developed will depend upon the condition of the vine. If this is good, three or four will usually appear. Our

first object should be to select the strongest of these; and this can best be determined when they are two or three inches long. Our next object should be to select that which is best placed; one badly placed should be rejected, even though it should be the strongest. For example, a strong shoot will sometimes be developed on the outside of the base spur, and grow out almost at right angles with the arm, instead of upward; such a shoot should be rubbed off, if there is another better placed. The objection is not so much to its placement as to its outward tendency. If it should start at an angle with the base spur, but on a line with the arm, it may be retained. The young shoots, in these cases, must be protected with much care, for they are very easily broken off, until they get to be a foot or more long. An accident now would not only be the loss of a year, but might lead to the loss of the spur itself.

A few words may also be added as to the manner of cutting off a spur for the purpose of renewing it. It must not be cut off close down to the line of the arm; for that might defeat the purpose by cutting off all the dormant buds. In the example given in Fig. 6, (p. 139,) the spur was comparatively young, and was not cut down because of age. In Fig. 5, (same page,) the spur was older. We now give an example of one still older, but not yet cut down, Fig. 3.

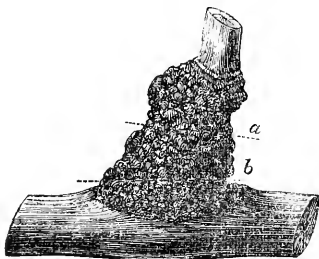


FIG. 3.

The proper place to cut this is at the dotted line *a*. The line *b* would be too low, since the best dormant buds lie above it. These knobs, or base spurs, increase in length so slowly, that, under favorable circumstances,

they will not need cutting in for many years. As soon, however, as they show signs of weakness, producing small shoots and poor fruit, they should be cut in for a fresh start.

We have now given a number of examples of spurs, our object being to make the reader somewhat familiar with the general principles which govern their formation as well as renewal. It must be borne in mind that spurs are not all alike in appearance; while many possess some degree of symmetry, others are crooked and gnarled. Their form will depend somewhat upon the degree of attention that is given while they are being formed; but accidents and local causes often place their exact form beyond our control. Their precise form, or outline, however, is a matter of much less moment than their actual condition. Provided this is good, it need concern us but little if they are not formed quite as symmetrically as they might be. We have given several examples of old spurs, and it will have been seen that no two of them are alike. There is a general resemblance between them, and no more. We allude to this variation in the form of the spurs, to meet the inquiries of some of our readers, who want to know whether the spurs will be just like our illustrations, and whether they will all be alike. To these inquiries we answer, that the young spurs will be just like our illustrations, and that some, (and perhaps many) of the old spurs will be just like them; for our illustrations are all actual portraits. The reader, therefore, may expect his vines generally to take just the forms that we have figured. We have, of course, selected the best examples, in order that the reader may have good models to work after. These remarks will apply to all our future illustrations. We know that a good deal of disappointment has been expressed in regard to some modes of training other plants than vines, because the object itself has not presented all the neatness and symmetry of parts set forth in the engravings with which the subject was illustrated. There may have been, and doubtless was, some shortcomings on the part of the novice; but it is not to be

denied that pictures are sometimes got up in which the imagination plays a distinguished part. The latter, however, are much more commendable than some caricatures we have seen. The reader, in such cases, must take into consideration the difficulty of getting drawings properly executed, and at the same time bear in mind that an artist strives to

give all the finish possible to his productions: Our large illustrations of the vine are faithfully executed, and the reader must aim to make his vines look quite as well in all their parts:

Some further remarks, and illustrations on lengthening the arm, tying up, &c., will complete this part of the subject. These will be given in our next.

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## GLEANNINGS.

BY E. H. C.

LET me put a spider on any lady's hand. She is agast. She shrinks. The nasty, ugly thing!

Madame, the spider is shocked, perhaps, at your Brussels lace; and although you may be the most exquisite miniature painter living, the spider has a right to laugh at your coarse daubs as she runs over them. Just show her your crochet-work when you shriek at her. "Have you spent half your days," the spider, if she is spiteful, may remark—"have you spent half your days upon these clumsy anti-macassars, and these ottoman covers? My dear lady, is *that* your work? If I were large enough, I might with reason drop *you*, and cry out at *you*. Let me spend a day with you, and bring *my* work. I have four bags of thread—such little bags! In every bag there are more than a thousand holes—such tiny holes! Out of each hole a thread runs, and all the threads—more than four thousand—I spin together as they run; and when they are all spun they make but one thread of the web I weave. I have a member of my family, who is herself no larger than a grain of sand. Imagine what a slender web she weaves; and of that, too, each thread is composed of four or five thousand threads like mine. Would you drop her too, crying out about your delicacy? A pretty thing, indeed, for you to plume yourself on your delicacy, and scream at us." Having made such a speech, we may suppose that the indignant creature fastens a rope round one of the rough points on the lady's hand, and lets herself down lightly

to the floor. Coming down your soft carpeted stairs in satin slippers is noisy, clumsy work, compared with such a mode of locomotion.

The creeping things we scorn are miracles of beauty. They are more delicate and intricate than any *ormolu* clock, or any lady's fancy watch, no bigger than a shilling. Lyonnet counted 4,041 muscles in a single caterpillar, and these are a small part only of its wonderful structure. Hooke found 14,000 mirrors in the eye of a blue-bottle, and there are 13,300 separate pieces in the carp that go to provide for nothing but the act of breathing.

Then there are wonders of locomotion in the world greater than any steam engine can furnish. When "the hart seeks the water brooks," how many things are set in motion! Eyes to see where the water is; muscles to move the feet; nerves to stir the muscles; and a will, no man knows how, to stir the nerves! There are swift creatures that depend for self-protection on their legs, as hares and horses. Others, less quick of motion, commonly have weapons, as the bull and the rhinoceros. Birds living in marshes have long legs, as the peasants living in marshes in the department of the Landes, make for themselves long legs by using stilts. Marsh birds have stilts born with them. The legs of animals are proportioned always to their bulk and to their habits. The huge body of the elephant stands upon thick pillars; the stag has supports of a lighter order, adapted to fleetness. Animals that get their living partly in the

water, as the beaver, the otter, swans, ducks, and geese, are born with paddles on their feet. The mole, again, is born with spades on his fore-legs, and the camel with his feet carefully padded, with his head lifted high above the sand-waves, and his eye carefully protected from glare and dust. One might think through a volume, to good purpose, about legs. Every creature has the legs it wants. A traveler in Africa relates how his luggage-mule stumbled and fell, and could retain no footing over ground covered with the fresh tracks of the hippopotamus. The hippopotamus was born with *clouts*, and has the right sort of feet for his own country. The mule was on a soil for which it had not been created.

Let us watch the movement of the little butterfly. How does it escape a bird? By tacking. It flies, when pursued, with a sharp, zig-zag motion. Let us compare strength with strength. The commonest of beetles is, in proportion, six times stronger than a horse. Linneus said of the elephant, that if it were as strong, for its size, as the stag beetle, it would be able to tear up the stoutest trees, and knock down mountains.

The movements of birds upon the wing, furnish a familiar world of wonders. Some fly like arrows; some describe circles in the sky; others pursue a wavering, undulating course. There are birds every where, and they are capable of almost any thing. What

one bird can not do, another can. There are birds of the earth, birds of the air, and birds of the water. There are birds that scream at sea in the midst of the tempests; birds that sing at home of a calm evening among the trees that shade the cottage door. There are birds that make their nests upon the ground in open plains, and there are birds that live in dark caverns; birds of the wood, birds of the mountain, birds that love towns and houses, and orchards and gardens, birds living alone in the deserts.

We have heard of the singing of swans. It is not quite a fable. During the winter nights, flocks of swans traverse the frozen plains of Iceland, filling the air with harmonies like the murmurs of the lyre. There is perfect time kept at the concerts they furnish. The ablest bird opens the chant, a second follows, then a third, and finally the whole choir fills the sky with melody. The air is full of modulated utterances and responses, which the Icelandic, in his warm cabin, is glad to hear, for they betoken the coming on of spring.—*Aimé-Martin. Lettres à Sophie.*

[These "Gleanings" lose none of their interest. We shall be very glad to have them continued, for they are both instructive and entertaining. What a world of wonders you have laid before us. They should set us all to thinking.—Ed.]

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## COUNTRY HOMES.

By GEO. E. WOODWARD, Architect and Civil Engineer, 37 Park Row, N. Y.

WE give this month a perspective view of a cottage, designed to afford a reasonable amount of accommodation for an average sized family, and which, if tastefully furnished, and fitted with suitable landscape surroundings, will convey a pleasing impression to all; much more so than dwellings of a more expensive class, where sufficient attention is not given to such accessories.

The plans of this house are compact, the rooms opening into each other in such a

manner as to afford easy communication and economy in heating. The porch is spacious, and more pleasant than the long, narrow verandah. The supply of water for all purposes is from a filtering cistern, which is connected with the kitchen sink, by a pump. The entire house may be heated by a furnace, hot water, or steam, as is most preferable; or stoves may be used in nearly all the rooms, if first cost is to be closely considered. A passage underneath the stair-



FIG. 14.—Elevation.

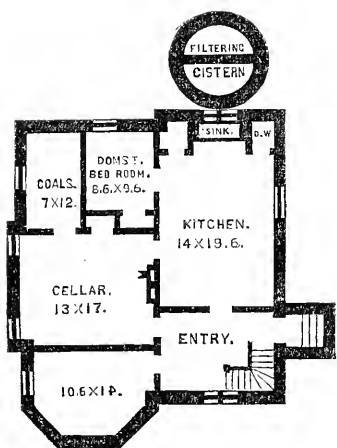


FIG. 15.—Basement Floor.

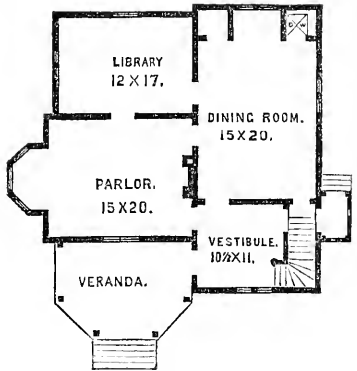


FIG. 16.—First Floor.

case connects with the side-door from the vestibule, and, with the exception of the library, all parts of the house are accessible without passing through other rooms. The cost of such a house, put up in a good and substantial manner, plainly finished, of good materials and workmanship, in average localities, would be about \$3,000. Fig. 18 shows one way of enlarging the plan, giving an additional room, closets, and other conveniences, at an extra cost of about \$600.

In the vicinity of large cities, and more particularly the city of New York, there are reasons which have a money value to them, why more attention should be given to suburban architecture, and why capitalists, as well as individuals, should undertake the construction of moderate-priced buildings, that shall command attention from the harmonious combination of fine architectural effects. It requires but a very limited experience to become aware of the fact, that dwellings of precisely the same cost, and similarly situated, will differ in their rental at least one half, and it is mainly ow-

centage to the value of the acres which surround it, and is the point which arrests the eye and secures the purchaser. Rapid railroad facilities, lower rents, more healthful localities, and the fact that the growth of this city "*Spuyten Duyvel ward*" has reached a point beyond the convenient access of the strictly business man, necessarily turn the

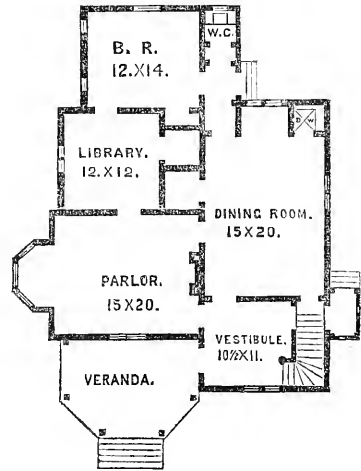


FIG. 18.—First Floor enlarged.

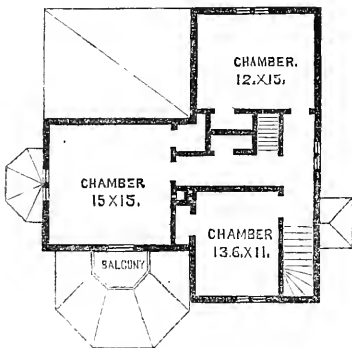


FIG. 17.—Second Floor.

ing to the reason that one is properly designed, and the other perhaps an amateur performance, modeled after the ill-proportioned Greek pediment style, too prevalent to be countenanced for a moment by any one who prides himself on his good taste. There can be no question that a fitly designed cottage, conveniently arranged, adds, independently of its own cost, a large per-

attention of those who look to the full measure of comfort, to a suburban life, ten to fifteen miles away from the unceasing noise and hurry of the city, where the business of the day is forgotten, and fresh air, fresh milk, butter and eggs, fruits, flowers, birds, &c., are luxuries unknown in town. Taking a strictly money view of building operations, for sale and rent, in suburban localities, and more particularly about New York, it would promise, by every course of reasoning, a remunerative return, if the plan were judiciously and tastefully carried out. The wants of the public, however, are so unequal, and their opinions so varied by the circumstances under which they are formed, that, unless an attractive beginning can be shown, otherwise very desirable property may remain a long time on the market. If we canvass real estate sales thoroughly, we shall find that property sells first, and at the best prices, which has ever so humble a cot-

tage on it, a starting point in which one may temporarily reside, and lay out his plans of future operations; for the construction of a country place is of all things one with which to make haste slowly. With those actively engaged in business, and to whom time is every thing, there is no disposition to add the labor and annoyances of building; the demand is for a home ready for occupancy; the thought is entertained, and the wish gratified, simply because the

opportunity presented itself; but it is far less trouble for young and middle-aged business men to stick to the city, than to give the time for building, particularly when they undertake their own architecture. Let capitalists invite them by snug, well-built, convenient, and tasteful cottages, and the demand will always be in advance of the supply, in all healthy localities, having rapid, reliable, and frequent communication with the city.

### HOMEWOOD PEAR.

BY F. R. ELLIOT, CLEVELAND, OHIO.

FRUIT:—*Size*, medium. *Form*, oblong ovate pyriform. *Color*, light pale yellow, nearly covered at each end with smooth russet, with irregular dots and specks of rough russet, giving a rough feel to it; a faint bronze blush in the sun. *Stem*, three-quarters of an inch long, of medium size, planted in a shallow, acute cavity, with almost an ap-

pearance of a lip on one side. *Calyx*, small, closed. *Basin*, round, abrupt, medium depth, furrowed at base. *Core*, medium. *Capsules*, long, regular. *Seeds*, plump, blackish. *Flesh*, greenish white, rather coarse-grained, breaking, moderately juicy, sweet, slightly aromatic. *Season*, late autumn. Origin, Baltimore, Md.

### ON MARKETING FRUIT.

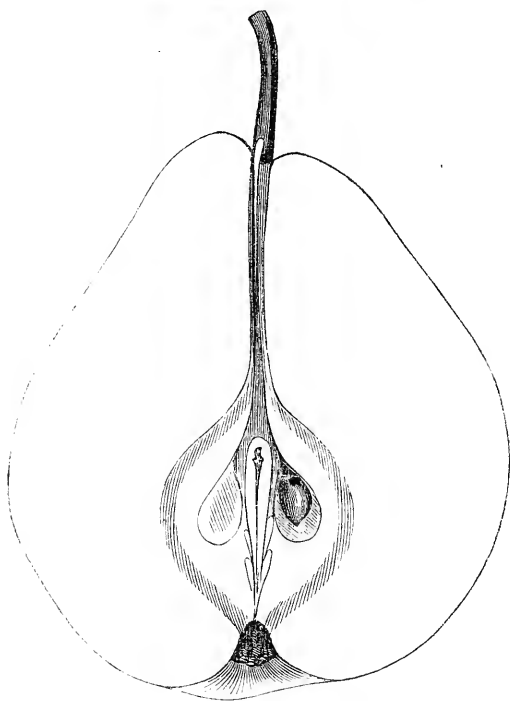
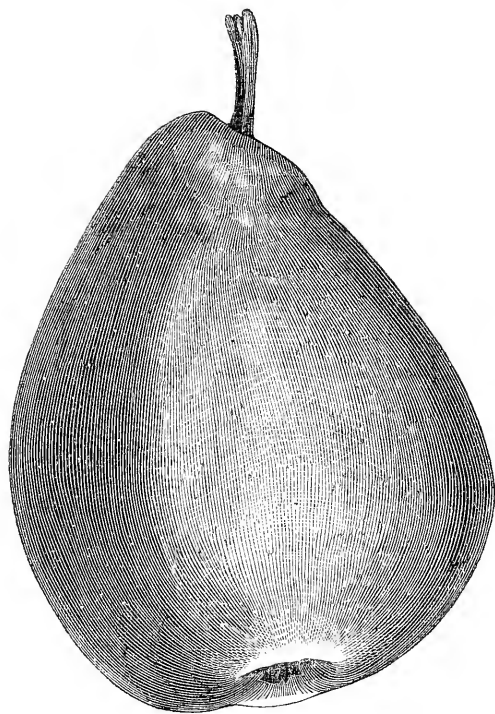
BY A CITY CARTMAN.

YOUR correspondent "Anxious" wishes to know upon whom he can rely as a faithful agent for the sale of fruit in this city, and wishes you to give him the name of the most reliable firm. I inclose you several names which you can depend upon, and may safely recommend. At the same time I *could* name a great many who are unworthy of confidence. "Anxious" is right in asking them to give reference to farmers and fruit-growers, instead of politicians, lawyers, and clergymen, who know little, care less, and perhaps are often deceived as to their fitness for business. The farmer himself is the one best qualified to scrutinize the capacity of his agent, and somehow contrives to get at the bottom of the operation by inquiry and comparison, and especially by the returns. When he gets the account of sales and examines the

sum total, by reasoning *a priori* he soon comprehends the whole matter, and is able to say whether he has been cheated or not. Farmers are becoming better educated than heretofore, and for this we are indebted to the HORTICULTURIST and other kindred works. You teach them how to raise fruit, but seldom give any instructions how to prepare and pack it for market. The large or small price obtained depends very much on this.

As I am the cartman alluded to, who received the fruit from the barge and recommended the house who obtained the best price for the grapes, I must be allowed to say something on this subject, that I hope neither the producer nor agent will take unkindly. The firm I knew to be above small tricks, and I had a good opportunity to know, having been often admitted behind the scenes; they are





HOMWOOD.

honest and honorable, and have secured a large business by an upright course. I haul for a large number of dealers, was raised in the fruit district, and when I came to the city to follow my present vocation, soon got a large patronage, because, they said, *I knew how to handle fruit*. I did not turn it upside down, or chafe the packages against the wheels, or get them smeared with mud, or deface the labels, or jolt it or dump it carelessly.

I soon found that those who sent nice, compact, neat packages, were more careful of what they put inside and how they were put up. When I saw an old dirty soap box containing grapes, I always felt sure that the fruit was inferior in size, or packed with flavoured straw paper, (perhaps none at all) or was unripe or mouldy, and I said without looking inside, "Here is a box of five cent grapes," and very seldom missed my guess; when I did, it was to know that they sold for still less prices.

Now perhaps, Mr. Editor, I am, as you say in another place, "trenching on your domain;" if so, I will forever hold my peace. But if you would like to have plain and simple directions how to pack fruit for market, I will furnish it.

I will venture to *stake* my receipts for a week, that the reason why the three farmers named received such irregular returns "for the same kind of Isabella Grapes" was, that No. 1, who got eight, nine, and eleven cents, had the best fruit to begin with; that he was not so penny wise and pound foolish as to try to sell poor, unripe, and inferior bunches at the full price, by concealing them at the bottom of his package; that he cut off the long stems, removed all unripe berries, packed neatly in a clean package, with clean white paper between each layer; that he filled the box so as to have none "laying around loose;" that he marked them legibly, and "shipped in good order." If they came through my hands, I will answer for the careful cartage. I always respect neatness; a nice clean butter tub never gets soiled in my care. I leave you to guess how I think the boxes of the other two farmers were

packed; badly enough, I am sure, and *such fruit, probably enough, was sent to the right factor*.

The agent, too, soon discovers whether the inside of the platter is clean, and if so, lays it aside for choice customers who are willing to pay. There are plenty of persons in New York who will buy and pay good prices for choice fruit; but would they pay ten dollars a basket for Apricots or Pears, if a portion of them were already decayed, even if the fair side was laid uppermost? Some of our farmers appear to think so; and that they are smart when they pack fruit, and put the gnarly, mildewed, and worm-eaten, at the bottom; don't they suppose it will be found out? Has not the commission merchant a right to feel offended, and ought he not to get rid of such a *patron*! by sacrificing his fruit? Perhaps the man up the river who got thirty-five cents for apples, barrels and all, last summer, will understand the application of this.

City merchants have feeling, and have their patience sorely tried at times; they see human nature at a great discount when they are asked to sell a lot of turkeys by weight, with a pint of corn in each crop, fed to them five minutes before they were killed. The farmer thinks he may get twelve cents a pound for his corn, when he ought to be handed over to the policeman. The mean men are not all confined to the city.

The cultivation of the soil is a refined employment, and these "hints" are not intended for fruit-growers and farmers generally, but for "whom the coat fits." I hope to be able one day to return to my native hills, to cultivate the ground and sit under my own vine, and pear-tree, and I wish to see the farmer come up to the highest poetic idea. Let his "pursuit be classed as not only one of the most interesting and benevolent, but one of the most useful and refined."

["A City Cartman" is no doubt right. The profits of fruit growing depend not a little upon the manner in which the fruit is prepared for market. All deceptions are to be reprobated. Honesty is the best policy in selling fruit, as in all other things.—Ed.]

## HORTICULTURAL CONSERVATISM.

BY II.

MR. EDITOR,—This is a field so broad, that, though I once attempted to enter it before, I never got farther than the margin; and now that I am attempting it again, I hardly know where to begin. But I will begin at the *Mould Heap*, or, rather, mould heaps, for in the orthodox school in which I was raised we had nearly a dozen of them, one for Azaleas, Camellias, Heaths, Pelargoniums, Fuchsias, etc. A mystical proceeding was the combining of these mixtures, and happy the favored prentice that was let into the secret. My first, or nearly my first employment in this country was in the establishment of one of our veteran Horticulturists, and there, again, were the same heaps of all shades and textures, which were there, if possible, still more religiously believed in. I was a little disappointed. I thought, in a practical, common-sense country like this, that these relics of "Horticultural Conservatism"—the many-shaded mould heaps—would have given place to something more generally come-atable; but the head of the establishment was one of those who had a great contempt for American-bred gardeners, and almost annually, at that time, imported his foremen, and with them too often their "conservative" ideas. The incumbent, at the time I refer to, had been twenty years in a large London establishment. The chief stock in trade of this genius was mystery; he had ways only known to himself of grafting, budding, cutting making, pruning, etc.; but, above all, his mysterious manipulations of the mould heaps were for a time a never-ending source of wonder to half a dozen of us boys,

"Who gazed and gazed, and still the wonder grew,  
That one small head could carry all he knew."

But we soon discovered that Michael's mysteries did not long stand him in lieu of brains, and that his operations in the course of the season were not of a character to command either the veneration of us workmen, or the respect of his employer. So

Michael lost his prestige—lost his place, and a less mysterious man was installed.

A year or two rolled on, and the writer of this began business on his own account, but he began with only *one mould heap*. He grew, and does yet grow extensively, the leading plants of the day, and flatters himself that he grows them well, all from this one mould heap. Yet there is nothing mysterious in this pile; any good gardener could suggest to you its component parts, simply rotted turf and decomposed manure. Some other combination would no doubt answer the purpose as well. Our friend "Fox Meadow," I have no doubt, would say, *Loam, Sand, and Muck*, and from that favorite combination of his grow, and grow well, almost any plant that ever had a name.

Mr. Editor, all men of large experience know that it is not the particular soil in which a plant is grown that insures its health and beauty, but other matters of I think much more importance, due attention to *heat, light, and moisture*.

When I hear a gardener extolling particular sands for particular cuttings, particular soils for particular plants, I at once put him down as one whose lack of experience, or want of originality, has never let him out of the leading-strings of some old-fogy instructor.

[While there can be no doubt that mixing soils is carried to an excess, and surrounded with a degree of mystery that is often ridiculous, there still remains the fact that some kinds of soils suit certain plants better than others. Nature has distributed her plants accordingly. H. is perfectly right in saying, that, with his rotted turf and decomposed manure, he can grow the leading plants of the day; we know that he does so; but his rotted sod furnishes not a little of that mould or muck that Fox Meadow is justly so fond of. We are sufficiently progressive, however, to be quite willing to see certain kinds of "Horticultural Conservatism" dealt a trencher blow.—Ed.]

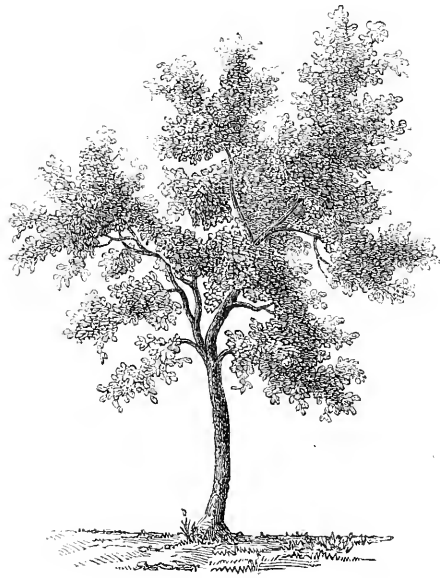


FIG. 1.



FIG. 2.

THE JUDAS TREE.

BY ENSES, NEWARK, N. J.

AMONG the ornamental trees employed in landscape gardening, for the purpose of creating or heightening effect, few offer greater inducements than the Judas Tree. Alas! that it bears a cognomen so little to our taste; but what is in a name? would not the rose retain its perfume under any other name? So with the Judas Tree; if, instead of bearing the name of that old scamp whom tradition saith hung himself upon this tree after he had consummated his treachery, it had been called after the most loyal and devoted of our Lord's disciples, it, probably, would have made no difference. The tree would have blushed just as much from virtuous modesty, as it still doth from shame. It has, sometimes, a more euphonious appellation, as in the Spanish, "*Arbol d'Amor*," Love Tree; but it is more generally known by the above name; as in the German, "*Judasbaum*," and in the French, "*Arbre de Judée*."

The tree is a native of the South of Europe, of a low habit, say from twenty to thirty feet, forming a spreading, umbrella-shaped head, which in the spring, before the leaves appear, is one mass of rich roseate bloom. It is one of those trees which may be introduced in single specimens upon a lawn with very fine effect, more especially when used in combination with certain trees and shrubs which flower at the same time; as, for instance, the *Laburnum*. Magnificent contrasts of color may thus be produced. Take an arrangement such as this: we suppose a certain spot on the lawn in full view of the house—say at or near the entrance. Because of unsightly objects, or to conceal a boundary fence, or because no pleasing distance is seen, you have massed a collection of evergreens, from the most dark and sombre to the lightest and brightest; that you have flanked these with a few deciduous trees, which come early into leaf, and full of the freshest and sprightliest green, while the other deciduous trees are yet bare or only budding, such as the European

Larch, with its feathery branches; and here and there a *Laburnum* or yellow flowering shrub on the outskirts. Now throw in any where against this back ground a Judas tree in full bloom, and view the same from the piazza or porch of the mansion; you have a picture that any one can admire, even though he be of rude and uncultivated taste. Nor is it in the flower alone that the tree is beautiful. The leaves are of equal beauty, both as to the shape and color; in the words of Loudon, "The foliage is hardly less beautiful and remarkable than the flowers; the leaves being of a pale bluish green on the upper surface, and of a sea green underneath, and of a cordate uniform shape, apparently consisting of two leaflets joined together." It is, moreover, a clean tree, and free from the attacks of insects. In the employment of the tree, it is not advisable to plant it in isolated or exposed spots, but rather where it will be, in a measure, sheltered by other trees of larger growth. The tree seems in this latitude to be quite hardy, but in the British Isles is usually planted against a fence or wall.

We have selected this tree for the readers of the *HORTICULTURIST*, more by way of suggestion than any thing else. Amateurs are frequently at a loss what to choose for their ornamental planting, and a word of suggestion sometimes comes in very apropos. It may so happen in this case. Some amateur may be puzzling his brains for just this very tree, and to him our suggestion will be welcome. If it be an object to convert a piece of ornamental ground into a kind of arboretum, we should decidedly recommend this tree, under the conviction that no collection would be complete without it.

Before concluding, we would remark that the subject of discourse is the *common* Judas tree, known as the "*Cercis siliquastrum*," and not the "*Cercis Canadensis*," or Canadian Judas tree, which is a native of our own country, but of inferior merit.

[Enses' taste may be said to be equally classic with his style. His own grounds

bear testimony to his success. We are obliged to him for his notice of the Judas tree, which is by no means as much used as it might be. To give the reader a fuller idea of the appearance of the tree, we have had

engraved a portrait taken from Loudon. The upper figure gives the general appearance of the tree; the lower figures show the foliage, flower, and fruit. When shall we hear from you again?—ED.]

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## MARKET GARDENING.

BY A JERSEY MARKET GARDENER.

MR. EDITOR,—I do not know whether or not you are a victim to the same experience as some of the rest of our Horticultural fraternity; if not, congratulate yourself. Every spring I am assailed by scores of gentlemen, who have purchased, some as an investment, some with a prospective view to a home in the country, and some, no doubt, from other causes; but usually all on the same string. They have five, ten, or twenty acres on hand, and they wish to know if they can not make it pay in the meantime; the land is always good, in close proximity to a railroad *dépôt* or steamboat landing, and why can't it be let to a market gardener, hired on shares by such, or a man be found to work it for the owner? To all such, my reply is a negative shake of the head. In most cases, I am unable, from want of time, to state the reasons why the attempt would be useless; and as many such persons are no doubt readers of the *HORTICULTURIST*, with your consent I will avail myself of your columns to make a general reply.

In the first place, there is no part of Horticulture in which there is such close competition as in market gardening; consequently, it is only profitable under the most favorable circumstances, and where the owner is able and willing to put his shoulder to the wheel with a will. There are several scores of us in this vicinity, and I know of no one who has been successful, but has been so in a great degree by his own personal labor.

Again, market gardening in this neighborhood, as a rule, can only be made profitable within six miles of New York, on a good

level wagon road, and every mile nearer the city enhances the value of the land for that purpose.

Again, for every acre cultivated the beginner requires a capital of \$200 per acre. This is the rock on which more than one half split, from the common notion that the cultivation of vegetables gives a quick return. This is a great mistake. Take any ordinary farm, and it will take three years before you can get it into the condition of a proper market garden, before it will pay more than current expenses, by any means that can be adopted. I have broke in four such farms, with all the advantages of mature experience, and in every case it required full three seasons before the capital sunk began to be returned.

Another consideration of vital importance is manure, every acre requiring annually at least fifty tons of well-rotted stable manure, which, at great distances from the city, can not be procured at a price that will pay, and concentrated manures will not answer, as they exert little or no mechanical influence in pulverizing the soil, which is of as much importance in the cultivation of some vegetables, as the fertilizing properties.

These are some of the reasons why it is useless to suppose it will remunerate any gentleman with land removed miles from the city, who, in utter ignorance of the business, would hardly risk the necessary capital, and the almost impossibility of being able to hire a suitable man if he did; and the certainty, should he succeed in letting it or hiring it on shares, that his tenant would fail, from the causes given.

For these reasons, I would advise all who

have such notions, that they had much better allow their land to lie waste than attempt to make it pay by cultivating it, either as a market garden or farm.

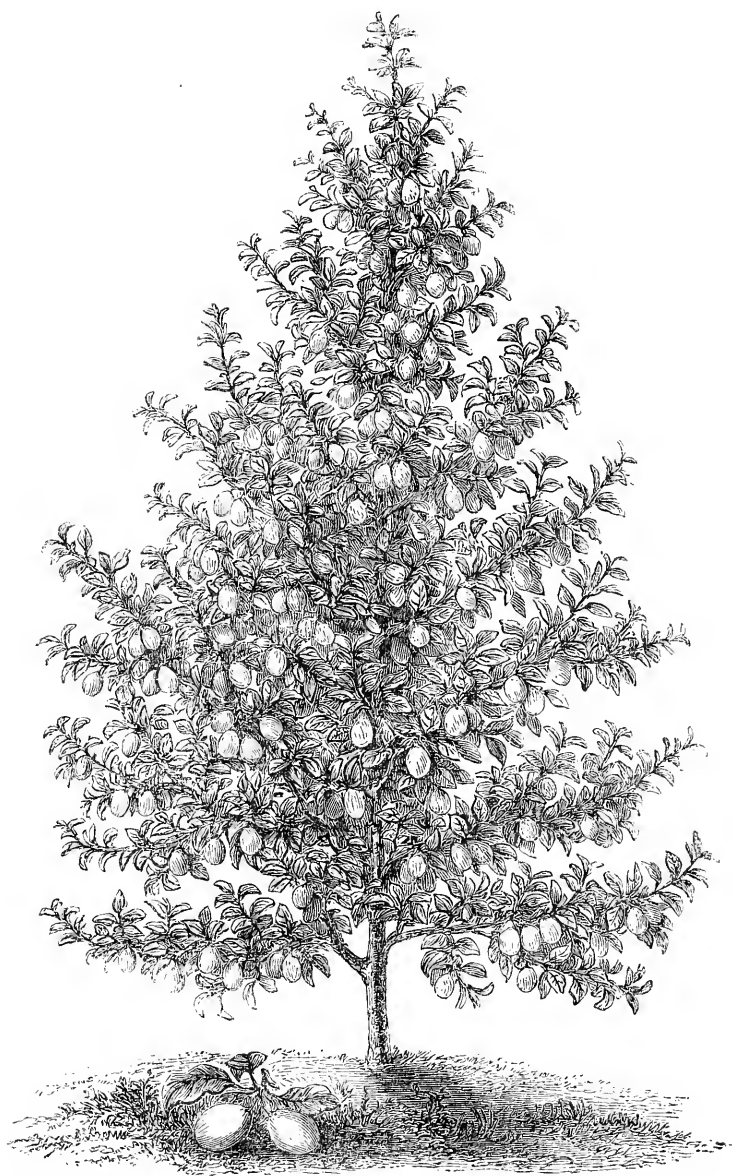
There is in the district in which I reside, where the soil is better adapted for the purpose of market gardening than any other around New York, from seventy-five to a hundred engaged in the business, at distances varying from one to six miles from New York, their gardens running from three to twenty-five acres each; average, perhaps, of ten acres. But, like men in all other kinds of business, there is not universal success. There is not more than one fourth that have made money. Another fourth, perhaps, make a comfortable living. Another live from hand to mouth. The remainder have failed, lost their all, and left.

You may think this is rather a gloomy picture; but I do not know that it is more so than that of many other trades or occupations. The cause of failure, in nine cases out of ten, has been insufficiency of capital; for the parties engaged in this business are usually sober, industrious, unpretending men. Occasionally we get one among us of a different type, who, although he has never plowed a furrow or handled a spade, has his head filled to overflowing with disjointed notions from the "Books." The career of one poor fellow of this stamp was so marked, that I will briefly relate it. He had evidently seen better days, and, as a *dernier resort*, fatally decided to try his hand at market gardening. He hired a large place, and paid \$150 for one quarter's rent in advance; but that was nothing; he had got ideas in his head, which, if realized—and why should they not be?—would repay that in three months ten-fold. He had seen somewhere that a certain never-failing mode of producing fine Cauliflowers was to manure the ground with rags. I do not know in what

quantities or at what cost, but the rags were procured, and the plants, supposed to be Cauliflower plants, were procured from one of the Washington Market hucksters, 5,000 for \$50. Cheap enough, if they had been what he had supposed them to be. But the victim of this crotchet watched, but vainly watched, for the expansion of the Cauliflower, only to see it develop into a genuine Bergen Cabbage, some time in August, when, perhaps, it was hardly worth the price paid for the plants. This, of course, was a finishing blow to the poor man. He left the Jersey farm, but, fortunately, got into something more congenial to his ability.

Next spring, in relating the circumstance of his troubles to me, he finished up by saying, "And do you know, Mr. —, that that old huckster woman, recognizing me in front of her stand, asked me again if I did not want any more early Cauliflower plants!" And as if shocked at the turpitude of our race, he turned sadly away.

[There is much truth in the statements of a Jersey Market Gardener. Some people go into the country, not doubting that the earth will produce spontaneously crops of fabulous size; and fabulous they prove to be. They forget that farming and gardening, when pursued as a business, require capital, knowledge, and business capacity, and that in the absence of these, success can hardly be looked for. Some may, and do succeed without capital, but the number is comparatively small. In the absence of money, we should look for knowledge, energy, perseverance, and dogged determination; these will go a great way toward success. Without capital in some of these forms, we should advise no one to go into market gardening, or, indeed, any other business.—ED.]



FOND'S SEEDLING PLUM.



## POND'S SEEDLING PLUM AS A DWARF.

BY THE EDITOR.

MUCH is said of Dwarf Pears and Apples, but little of Dwarf Plums. The Plum is susceptible of being grown as a dwarf. It may be made almost as beautiful and symmetrical an object as a Pear; some kinds quite as much so. Like the Pear, some kinds of Plum take on a good form better than others. We herewith present an example in Pond's Seedling, one of the best for the purpose. It is a portrait of a tree in the grounds of Messrs. Ellwanger and Barry. Dwarf Plums are admirably calculated for the garden. All parts of the tree being within easy reach, the fruit is readily gathered, and the "little Turk" is more under control. Trees of this kind become objects of regard, receive better treatment, and consequently produce bet-

ter fruit. There is no reason why they should not be alternated with Pears in the garden. They are deserving of a place there, and will well repay the little extra trouble they demand in their formation. Our object at present is simply to call attention to the subject, and to present an example of a good specimen.

Pond's Seedling is a vigorous grower, and quite productive. The fruit is large, and oval in form, with a yellowish skin, tinged with brownish red, especially on the sunny side, and covered with a thin, whitish bloom. The flesh is yellow, somewhat coarse, sugary, and juicy, but not of the highest flavor. It is a very good Plum, ripening about the middle of September.

## CLEANING HOUSE.

BY R. R. S.

THIS is the season for that all-important operation in domestic economy, known as house-cleaning—high carnival, when woman is in her glory, and man one of the most forlorn of all bipeds; often a very hen-pecked one at that. Now is the time when every nook and corner is turned inside out. The poor spiders lose the shelter of their long-established webs. Rats and mice have reached a day of judgment. Even the bedsteads come down, and by the tidy housewife undergo a scalding inspection; anointed sometimes with a potent unguent. With a feather in her hand, that housewife may be seen applying the white of an egg beaten up with quicksilver—sovereign specific—into every crevice and cranny. The walls and ceilings are all whitened, and made as pure and sweet as may be. The fresh air is freely admitted every where; and, in short, a general purification and ventilation ensue. All for what?

Why, to give health and comfort during the coming summer and ensuing year.

And now, gentle reader, you will ask, perhaps, what all this has to do with horticulture and its kindred work. Without shocking you too much by boldly answering "a good deal," we would, nevertheless, gently insinuate a good deal by way of *analogy*. How? you would say. Why, listen then, and we will tell you. Perhaps, among other good things, you rejoice in the possession of a peach, a pear, or an apple orchard; perhaps in all three. Think you, then, that there is never a season for *house cleaning* among these? Is there no health and comfort, or, in other words, thrift and profit, to be looked after among them? Let us take a short excursion through them, and see *how the house looks*. And first we will pass up through these peach trees, on our way to the pears and apples. Well, these are fine looking trees; they have

made great growth for the three years that you tell me they have been planted; but stop a moment, my friend; first look close to the ground around that fine, dark-colored, clean-barked tree you are bragging about, and tell me what moistens the ground about it, and what all that stuff is clinging around the butt. Gum, eh? Precisely; gum it is. Now out with your knife; scrape away, dig into the bark, and see what it is that causes all this gum to exude. What! are you astonished at that great fat, white grub, that you have just taken out; so over-fed that he fairly rolls out the moment you touch his hiding-place? This is his season. He is now enjoying his carnival. Insatiable glutton; he means to stop only when he has girdled that tree, and you would only have known it when too late to effect the cure. Now follow the housewife's plan—*clean house*. Now is the season. A month more, and you will be the loser.

Now let us pass up among the pears. See here what your Hibernian incompetency effected for you last season. Look where the whiffle tree has struck when the plow passed through here last summer. Look on that row of trees, and see every fourth and fifth tree has a large piece of bark cracked, raised up, and protruding like an ugly scab. Well, look into it, or rather under it. What do you find? A perfect nest of insects, a mass of eggs. Just so. Here is what in a few weeks later will prove an army, which shall lay waste the beauties of the orchard, just as effectually as Uncle Sam's hosts have done in rebeldom.

Look, too, at this row of trees; these dwarf Duchesse d'Angoulêmes, Bartletts, &c. What is the matter with the bark? all covered with scales? Insect life, my friend, sucking out the life-blood, and impeding the growth of your trees. Go to work, *clean house*. You need not continue the walk up into the apple orchard; you will find the same thing the case there. The same work is to be done. The house

must be cleaned. Hunt out the borers from your trees with fire and sword, hot water and knife. Scrape away, and brush off the larvæ of insects which are to spring into life with the coming summer; and after you have, in imitation of the housewife's skill, expelled the vermin, cleaned the wood-work, then you may, to carry out the figure, scrub your floors. The young grass will now begin to start up, and the seeds of noxious weeds to germinate. Don't let them go too long, but, as the housewife chooses a warm, dry day to scrub the floors, so take advantage of a dry time and a hot sun to lightly plow or hoe the surface, and then you will insure a clean floor for the summer. We object to the plow in a closely planted orchard of young trees, especially dwarf pears, for not only is there great and almost inevitable mischief occasioned by striking the trees, and disturbing their tender bark, but, unless the plowman is very experienced and judgmatical (to use a coined but expressive word) in his work, he will do still greater mischief in cutting off the roots of the parent quince, which, lying near the surface, are stretching forth through the surrounding soil, in quest of nourishment to elaborate into the growing tree.

Thus, then, you see that the subject which, from its title, you judged in the beginning to be entirely out of place in a horticultural magazine, and foreign to the science taught therein, is not only very apposite, but of close kin to the aims of both. We say, then, *clean house*. Now is the season. Defer it, and your labor will be doubled, and all the advantages above alluded to in a great measure gone beyond recovery.

[And we say too, *clean house*, and keep it clean. The above was intended for our May number, but come to hand too late. is too good, however, to be lost, and we therefore print it now. If any of our readers have not yet cleaned house, let them do so at once; for it is better late than never.—Ed.]

## REVIEW OF M. FRYER'S ARTICLE ON THE CIRCULATION OF THE SAP.

BY YARDLEY TAYLOR.

RESPECTED EDITORS:—In the January number of the *HORTICULTURIST* is an article on the "Circulation of the Sap, by M. Fryer, Brandywine village, Delaware," and had not the editor, in a note, expressed the presumption that it was in "response to Mr. Taylor's article on the Downward Flow of the sap," I should not have noticed it in this way. I fully agree with the editor, that "there is no use in expressing an opinion without at the same time affording proof to support it." The writer of the article asserts he is "not an aspirant for fame;" but from what he has said, we must conclude that he belongs to that class of individuals who may imagine they will have the glory "of solving this problem." However, let that be as it may, I would advise him to refrain from using terms not in use by our best botanical writers. He has used the terms "veins and arteries," and in referring to "the going about of the blood through all the parts of animal bodies," says, "just so with the leaves of trees," and instances the leaves of the fig and others, with a branch of the "crab apple," which, after a certain process, "you could then perceive the arteries and veins in red streaks on the wood, as clearly as you could see the veins and arteries in a man's arm by tying a ligature thereon;" and thus concludes, "from which it would appear that the roots are the depository of the sap in a congealed state of torpor during the winter months, liquefied at the return of spring for the purpose of again performing its natural functions." He professes "to be guided by reason;" but the reason for such a conclusion is not very apparent; at least, I can not perceive it; and this conclusion is opposed by the ablest botanical writers of the present day. Gray, in his *Botanical Text Book*, says, "there is no such circulation in plants as there is in animals;" and the writer of the article "Botany," in the *New American Encyclopædia*, asserts there is no downward flow of sap in plants. Other writers of eminence give it as their opinion that "the office of

the leaves is chiefly perspiratory, and that this will one day be generally acknowledged." I leave the writer of the essay under review to contend with these, and will merely remark, that a person may render himself as famous by opposing the right as by opposing the wrong; but the value of the fame of the two will be very different. The Franciscans, who opposed Galileo in his theory of the rotundity of the earth and its motions round the sun, made themselves famous, as also the doctors of Salamanca, who opposed Columbus's theory, that by sailing to the west he could reach the East Indies; but the fame of these opponents is very different from that of Galileo and Columbus in this day.

The idea of the sap returning to the roots, and their laying in a state of torpor during the winter months, may be shown to be erroneous by a little careful examination. Examine the limbs, trunks, and roots of trees in the fall just after the leaves have fallen, and the circulation for that season has ceased. We then find the pores of all these with very little sap in them, and mostly filled with air. Mechanics, who have made experiments, say this is the best time to cut timber for preservation; having less sap, it seasons more readily, and is less liable to decay. Examine them again in the winter, particularly in mild weather, and they will show a very considerable increase of sap in the roots and bodies. This must have been taken up by the roots during mild weather, since the fall of the leaf; it could come from no where else. The supposition of its descent from the branches can not be true, for it was not there. Examine these again just before the leaves expand, and the pores are gorged with sap throughout, pushing upward, and depositing matter for growth; for the sap, even then, before the leaves expand, presents a milky appearance, showing matter in a state of preparation for depositing woody fibre.

The writer admits "that it is the earth

which affords sustenance to the roots and spongelets of trees as they yearly expand." If so, and it is no doubt true, what need for a downward flow of sap, seeing it could bring no addition that it had not before received. He then says, "oxygen, or any other atmospheric influence, will not be sufficient to keep a tree, or shrub, or plant, alive, independent of the earth." Has any writer ever said so, or even thought so? If not, why make the remark? But if he will consult some of our Horticultural works, he will find that flowers, plants, and even fruit, have been brought to great perfection in baskets of moss, "independent of the earth;" so that that part of the operation needs qualification. Again he says, "Insert the bud of a variegated Jasmine into a plain Jasmine twelve feet above the ground, the poison will reach the branches next the roots in course of time, as well as those at a great distance above it." Inarching will have the same effect, which clearly demonstrates "the sap's circulation from the roots to the further extremity of the tree, and from thence back to the roots." Is it a fact that one kind of Jasmine, by being budded on another, will destroy it? If so, it is something I am not acquainted with; but if so, the conclusion come to does not seem clear. We all know who have any thing to do with planting and taking care of trees and shrubs, that often, when one limb is affected from any cause, other limbs become so, until finally the whole plant dies. Cutting off a large limb often kills trees; the saps vessels that supplied these, not being able to keep up the circulation, the sap becomes clogged and gorged in them, and finally fermentation and decay ensues by spreading to other parts. The writer might have found a case in point in his animal circulation. We all know that when, from any cause, the circulation in animals is obstructed, inflammation and disease set in, and, unless the obstruction is removed,

proves fatal by extending to other parts. But the animal system has an advantage that the plant has not; it can carry off morbid as well as effete and worn-out matters, which the other can not do. It sometimes covers up decaying parts, and may live long afterwards; but such places often extend, and finally destroy the plant. I want some more direct evidence before I can endorse his conclusions.

The editor in his note says, "The rise and fall of the sap is susceptible of easy demonstration; the *modus operandi* is not so clear." He wishes his readers to discuss the subject, and promises: "Our opinion will be seen by and by in our Hints." If he meant downward flow by the term "fall of the sap," why did he not say so? At any rate, I more than half suspect he does not fully endorse it; and I will tell him that his readers will require something more than Hints when he shall attempt it.

[Very good; but if our "Hints" on this point prove to be as full as they have on others up to this time, we have no doubt our readers will be satisfied, if not convinced. There are certain topics that we pass by with a mere casual remark, because they will form subjects of special treatment in our "Hints," and we do not wish to anticipate them, though we are very glad to have them discussed by our readers. We said "fall of the sap," because the words express pretty nearly what we meant; whereas "downward flow" would not. We should not enter upon the discussion of such a subject without defining the meaning of our terms. Such a precaution would often prevent controversy. Scarcely any two readers will understand Mr. Taylor's "downward flow" alike. We may further say, for Mr. Taylor's satisfaction, that it is not a fact, "that one kind of Jasmine, by being budded on another, will destroy it. —Ed.]

## IS IT PROFITABLE TO CHEAT?

BY WEST WASHINGTON MARKET.

WRITING for the press is decidedly not my "fort," as Artemus Ward would say; but, Mr. Editor, I can not withstand the temptation to reply to the suggestion made by your correspondent, who complains that several parcels of fruit sent to market by three neighbors brought such dissimilar prices as to excite suspicion of fraud in the factors who sold the parcels in this city. I can, perhaps, demonstrate that the fault lays nearer home than the complainant believes.

It is a well-known principle in trade, that he who sells by samples is bound to deliver an article as good, or make up the deficiency, or deduct from the price, or forfeit the sale, and pay damages. The character of the New York merchant is dear to him, and I am happy to say is generally well sustained. Whenever he discovers an attempt at fraud on the part of a consigner, whether it is in a basket of fruit, a barrel of potatoes, a bale of hops, or a cargo of flour sold by him as merchantable, he at once allows the claim for damages, and the owner has to suffer for the deduction, which is always greater than if the sale had been made with the facts all apparent.

The commission merchant, before he delivers a parcel, may chaffer about its value; but if he sells it as of the best quality, and it proves, on examination, to be inferior, he is powerless; his honor is impugned, and he, without hesitation, accedes to the perhaps unreasonable demands made by his customer. *First*, to show that he will not connive at petty cheating; and *second*, to make amends to the purchaser for his disappointment in buying a poor article, when he contracted for a good one. This loss, for it really is one, as I will proceed to show, comes out of the pocket of the producer or shipper. A retailer calls at my store to buy extra fine grapes for some of his able, willing-to-pay customers. I show him packages, with beautiful fruit handsomely displayed on top. He removes one layer, and finds the second one

nearly as good. Do you think they are all as good as the sample? Oh, no doubt of it; come from a good source; a well-to-do farmer; dresses like a gentleman; talks like a man who knows what he is about. Oh yes, they must be No. 1; can not believe he would be so blind as to put bad fruit in the bottom; knows better than that. What is the price? For such choice fruit as that we want 13 cents. Very well; send up the lot. Here is a good sale made, and we record "sale of twenty boxes of grapes, weighing 1,150lbs., at 13 cents," and try to find time to write to our consigner, before the mail closes, to send more of the same sort, but are prevented by other customers coming in, and we resolve to do so before going to dinner. Availing ourselves of the lull in trade about three o'clock, we write the letter, wherein we commend the quality of the fruit, the style of packing, the neatness of case, &c., and inform the grower that *such* grapes will sell in any quantity, and command the highest prices; advising him to put his whole farm into grapes. Think of it, at 13 cents a pound, and bought eagerly at that! It would pay for a new farm every year. But what is that noise in the front store? No doubt some drunken fellow; turn him out. If he won't go, call a policeman. Can't be interrupted with such fellows, when we are busy in the office. Correspondence must be attended to. But he won't go out. It's Mr. ———, corner of Third Avenue and ——— street; says he will blow your infernal swindling establishment sky high. He will publish you in the *Journal of Commerce* to-morrow morning. He was never so cheated in his life. Says you must send for those miserable, mouldy, stinking grapes directly, and he shall sue you for a thousand dollars damages; that you have lost him one of his best customers, (to whom he sold a box of them for a dinner party, and had them returned when it was too late to supply others,) whose custom is worth more than

that every year, and he can prove it, and will too.

We drop our pen; see Mr. ——— who, is very red in the face, and is nearly ready to collapse with wrath, at our ——— imposition, as he terms it. Do try to pacify him. Offer to make all right. Will send up, and inspect them; make any reasonable deduction; mean to deal upon honor; will satisfy him that we were honest in our belief and intentions. Ask him to say how much we shall deduct from his bill. After a few more expletives, he declares that he will not have them in his store at any price. We must take them away at once; that not over ten pounds of grapes in each box are merchantable, and no customer of his would receive them as a gift. We then propose that he keep the good ones, and we will remove the rest, and after a while succeed in appeasing his anger, by allowing him to retain 10 lbs. out of each box, making 200 lbs., which we let him have at 10 cents per lb. We now send a cartman a couple of miles, and receive back the twenty packages, which we find consist of mildewed, unripe, and unsaleable grapes, which we try to sell, first, at 4 cents; then at 3, and finally we find a customer who offers 1½, which we readily accept. Now, how stands the account current with the producer? and who is to blame for sacrificing "twenty boxes choice fruit," shipped to a commission merchant, who "was either above his business, or not trustworthy?" Let us see the statements. First,

sale of good grapes, per sample:  
 1,150 lbs at 13 cents, is - - \$149 50  
 Deduct charges for sale, which  
     cover all expenses, freight }  
     and cartage from boats, 10 } 14 95  
     per cent. } ———

Net proceeds, - - \$134 55

Second, sale of 20 boxes "Pharisaic" grapes:

200 lbs. sold for 10 cents, - . \$20 00  
 950 lbs. 1½ - - 16 62  
 Charges, 10 per cent. - \$ 66

Extra cartages on boxes }  
 sold and returned, } \$2 00 \$5 66

Net proceeds, - - \$30 96

Difference, - - \$103 59

This may perhaps be considered an extreme case, but it is a truthful one. We have numerous instances where a state of facts show *more than the total loss of all poor grapes put in* out of sight, as thus: 20 packages by sample, say 1,150 lbs. at 9 cents, \$103 50. We are called upon to make a deduction of two cents a pound, on account of 10 lbs. unripe grapes in each box, which really detracts more than that from the value. We, therefore, deduct 1,150 lbs. at 2 cents, \$23; leaving the proceeds of the sale \$80 50. If left out altogether, the remainder, 950 lbs., sell readily at 9 cents, \$85 50, showing an actual loss of \$5 in money, besides the 200 lbs. of inferior grapes. Now if those who send fruit to market will take the trouble to select, and send only one quality in each package, they will realize more money for it, and will save the commission dealer great annoyance, thus permitting him to give satisfaction to his customers, who will be more willing to pay the highest prices for what he offers for sale, when they know it can be relied on.

[Here we have the other side of the question. Both classes of men are to be found. If those who grow grapes will take the trouble to assort them, putting each grade by itself, they will experience little difficulty in finding honest merchants to sell them at their full market value, though a few may be so unfortunate as to fall into the hands of impostors or persons who do not understand their business. The ready sale of fruit depends not a little upon the care with which it is selected and put up. Such deception as that mentioned by West Washington Market should not be tolerated. Fraud is practiced in most kinds of business; but we should be glad if horticulturists would wash their hands quite clean of it.—Ed.]

## REPORT ON GRAPES AND CHERRIES.

BY J. C. COE, SIDNEY, SHELBY CO., OHIO.

I SEND you a short account of the grape and cherry crops in this county the past year.

*Names. Mildew on leaves. Mildew on fruit.*  
Concord—None on leaves or fruit; the only well ripened hardy grape we had in this county the past year.

Delaware,	Some.	None.
Rebecca,	Badly.	None.
Diana,	do.	Badly.
Catawba,	Some.	do.
Isabella,	Badly.	None.
Herbemont,	Some.	Slightly.
Perkins,	Slightly.	None.
Hartford Prolific,	Slightly.	do.
Northern Muscadine,	do.	do.
Union Village,	Badly.	do.
Logan,	do.	do.
Clinton,	Slightly.	do.

The above kinds have been in bearing from

two to six years. Young vines planted one and two years, such as the Creveling, Cuyahoga, Anna, Taylor, Rogers, Hybrids, and others, cast their leaves early in August on account of mildew.

We had a fine crop of cherries, such as Elton, May Duke, Early Richmond, Belle de Choisy, Belle d'Orleans, Reine Hortense, Rockport Bigarreau, Purple Guigne, Governor Wood, Yellow Spanish, Black Hawk, Black Tartarian, and other kinds, but think that the Early Richmond or Early May, May Duke, and Governor Wood, are the best for this locality, all things considered. May send you a description of our pear crop, standard and dwarf, in case you think this worthy of any attention.

[We are obliged to you for your brief report on Grapes and Cherries, and shall be glad to hear from you about the Pears.—Ed.]

## THE SEEDLING GRAPES OF MR. CARPENTER, OF KELLEY'S ISLAND, OHIO.

It is always desirable to have full and reliable information in regard to the origin of any fruit likely to occupy a place before the public. A number of conflicting accounts having appeared in the press as to the origin of these seedlings, some of them disputing Mr. Carpenter's claim of having originated them, we wrote to him, requesting a statement of their origin. In response, Mr. Carpenter sent us the following account, which we put upon record as a part of grape history:

"The seeds of the Mottled, Mary, Ellen, and others, I selected and planted myself. In 1849, I saw in the garden of my father-in-law, Mr. Datus Kelley, a strong seedling growing among some Isabella layers, and stuck a stick by it, and called the attention of Mr. K. to it, and requested him to preserve it, and plant it out. Although a strong seedling for one growing so disadvantage-

ously, it was quite small compared with the layers, and but for the above request, would not probably have been saved. Mr. K. planted it in the garden of a tenant-house of his, where it stood five or six years fruitless, and from that cause once narrowly escaped destruction by the tenant, who did not know its history, nor even that it was a seedling.

"The first time I exhibited it, and repeatedly afterwards, I gave the above of its history, and those knowing it, called it my seedling; and as for some years no one else appeared to father it, I have also often spoken of it in connection with those I planted the seeds of.

"Mr. Kelley, in whose garden it originated, has not yet promulgated *his* claim to its origin. He has since deeded the house and garden to his son, Mr. William D. Kelley.

Yours truly,  
"CHAS. CARPENTER."

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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CULTIVATING ORCHARDS.—Some remarks in response to the *Gardener's Monthly* will not be out of place. The article in our February number was intended only in part for our cotemporary, and hence was not addressed directly to him. We thought his article was not marked by that fairness which is really characteristic of him, and we felt hurt at some of his implications, which we thought quite of place. We had tried to state that we were simply preaching what we practice. That no unjustness was intended we fully believe. We may have been too sensitive.

In regard to the "Thirty-nine Articles," we had no idea that a religious bearing would be given to them, such a thing being entirely out of place in a horticultural journal. The article took its form, almost involuntarily, and was intended as a bit of humor. Since, however, our cotemporary has viewed it in a religious light, and intimated that nine-tenths of the community will dissent from the Thirty-nine Articles, we may state our conviction, that nine-tenths of the people who have any religious belief, will and do assent to the orthodoxy of the "Thirty-nine Articles of Faith," however much they may dissent from episcopal church government. We were not brought up under it, and do not express any opinion in regard to it. The comparison may prove to be an unfortunate one, but it so happens that thus far our Quaker friends have given us the most hearty endorsement, some of them not far from Philadelphia, as our cotemporary will see, if he reads our columns, as we shall print these letters from time to time.

Our cotemporary says, that he never saw a cultivated orchard; we have been a good deal more fortunate, as we esteem it. If he will only give us his genial company for a couple of days, when next he comes to New York, he shall see more than one.

We deem it quite safe and proper to present as a model for imitation the most perfect thing of its kind that can be produced; we think it wise to be always rising toward perfection; otherwise our course will not be onward and upward, but backward. When our cotemporary admits that "an orchard may not be *quite* as perfect when it is laid down in grass," he virtually admits what we are striving for; and we think he must perceive the difference between a crop of onions and radishes, which occupy the soil temporarily, and a crop of trees and grass, which occupy the soil permanently. We agree with him that it would be objectionable to have heavy freight tacked on to a passenger train, and hope he will agree with us in keeping "heavy freight" out of the orchard, for it impedes progress not a little.

We stated that an orchard in grass suffers more in time of drought than one well cultivated. Our cotemporary says, "this is not a fact," "except under special and unusual conditions." But we *know* it to be an absolute fact; and since he admits that he never saw a cultivated orchard, we can not perceive how he can doubt it, except by inference. It is not only fact, but philosophy. The same remark is true of the fact that grass robs the trees of nourishment very little, if any less than some root crops. Grass requires nourishment, otherwise



it is a waste of means to top dress it; and unless it gets nourishment, it will run down and become so stunted that a ton of hay per acre could not be got from it, though roots and all should be grubbed up. It is plain to us, therefore, that grass robs the soil of nourishment very little less than some other crops; say, for instance, a crop of turnips. We venture to say, that any one who tries the experiment suggested by our cotemporary will be disappointed.

In regard to young trees set in broken sod growing well, it is an undoubted fact. We agree most cordially with our cotemporary on this point, and it harmonizes precisely with our teachings. It is because the decaying sod furnishes vegetable matter to the soil. In the form of sod, he has been several years in collecting this vegetable matter, and he can do it in one, if he will. In regard to renovating land by laying down in sod our views will be found in "remarks" appended to another article. Farmers often "lay down to sod" because the soil is more or less exhausted; but they manure pretty liberally before doing so; and in a few years they take up the sod because *that* becomes exhausted, and manure at the same time.

Keeping orchards in grass is a very common, as it is also a very old practice. We do not think it the best, and hence have said so. We are glad to know that some of the best orchardists and pomologists endorse our views, as the result of their own practice. The result of our own experience is, that every man who owns an orchard will be benefited by cultivating it, if he can command the means to do so, and will employ careful men to perform the operation, or superintend it personally.

No, we will not "put a tongue to your pen," but give you our hand most cordially.

WINE FROM KELLY'S ISLAND.—We are indebted to Mr. Carpenter, of Kelly's Island, for his seedling grapes, and also for two bottles of Catawba wine, for which he will please accept our thanks. The wine we found to be pure and well made. It is an excellent article, and we accordingly add Mr. Carpenter's

name to the small and select list of good wine makers. Like other good wines, it does not keep long in *small quantities*; at least with us.

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LATE GRAFTING.—Last July we made a few remarks on late grafting, to which one of our correspondents, some months afterward, took exception, as will be seen from the following extract from his letter:

"I see in the July number of the *HORTICULTURIST* an article on the subject of late grafting. I think it is calculated to mislead some. As, for instance, cherries and other kinds of stone fruit must be grafted early, if you want the grafts to succeed. If not, you may expect not more than one in twenty will grow. But the pear I have grafted with good success as late as the writer speaks of; at least that is my experience."

Now that writer was "us," and we should be sorry to know that any thing we had written could mislead any body. We have read our remarks over, and do not find a word to alter; every thing there said is just right. Our object was to let our readers know that they could graft late with entire success, provided the scions are in good condition. Many not knowing this, throw valuable grafts away. To such the information conveyed in our remarks was valuable. Our correspondent says Cherries must be grafted early; he will probably be dismayed when we tell him that we have grafted Cherries much later than the Apples and Pears mentioned. The strongest and finest growth we ever had from grafts was from some Cherry scions put in during the early part of June, the scions having been kept in an ice house. We are writing this on the 19th of May, and our grafting has yet to be done; not so late from choice, but because editing the *Horticulturist*, and other necessary duties, have not yet given us the time to put them in. Between this and the first of June we shall put in Pears, Cherries, and Plums, and shall be disappointed if we lose one in twenty. Our readers shall know the result. Those put in on the 28th of last May, (over 50,) are now every one of them in the finest con-

dition; there has not been a single failure from any cause. Notwithstanding, it must not be understood that we advocate this very late grafting, except from necessity; all we

aim at is to let our readers know that they can succeed late if they have not been able to graft early. We think the best time to graft is just after the tree has begun to grow.

## CORRESPONDENCE.

I have read in the HORTICULTURIST your Hints on Grape Culture, and think I understand them. I believe you do not any where tell us whether you think it advisable to cut off the tendrils on the growing shoots. Will you please tell us in next number?

Also, in pruning the long shoots *i* and *k*, you say prune to one bud. Do you mean the base bud, or the next one above it?

Where two or three shoots start from one joint in last year's shoot, on an old vine, is it best to let them all grow, or only one or two? which?

GREEN HAND.

Troy, N. Y.

[We are glad to hear that you understand our "Hints." We try to make them plain, and are always willing to give any explanation that may be needed. We have not yet said any thing about the tendrils. The vines will be benefited by cutting them off. The shoots *i* and *k* are to be cut down to the base buds. When two or three shoots start from one joint, all but one are to be rubbed off, as will be explained in our next article.—ED.]

DEAR MR. EDITOR,—I send you herewith the last number of the "Mountingville Clarion," containing the report of the trial, in the Pomological Court, of the charges and specifications brought against me by Berkshire. This is the most extraordinary decision since these "mountings" were first invented, or, to come within the homo-logical period, since the first *pair* ate the first apple.

You will see that I am under injunction to make no more "model reports." I can therefore make no reply to Berkshire, except to acknowledge that he has caught me napping—"in the order of their ripening."

I forward the fine; do not *smell the cork*, but if the bottle should, "partly by accident and partly by mere design," get its neck broke while in your possession, I know what you will do—your office is an appropriate place to ascertain if the wine is "fine." As you are to pay the costs, this is only fair play. I pay the express charges. I never send a bottle of fine wine to a friend, and leave him to pay double the price that he could buy finer for at home. I have only "a little more of the same sort left," and this I shall keep until you next come up a-fishing. Send me Berkshire's address, and he shall taste *colored* Isabellas that he will call ripe.

Yours truly,

PRATIQUER.

### THE GRAPE QUESTION IN COURT.

[From the Mountingville Clarion.]

BERKSHIRE	}	IN POMOLOGICAL COURT,
<i>vs.</i>		<i>before</i>
PRATIQUER.	}	HON. METHUSALEH PHOGEE, SR. Q.J.

In this case defendant is charged by complainant as follows:

*Charge 1.* False pretences.

*Specification 1st.* In this, that defendant caused to be published in a magazine called the HORTICULTURIST, that he had then and there made a "model report" on grape culture.

*Specif. 2d.* That in said report he had intimated that the Isabella grape would ripen with proper care—that it *was* worthy of cultivation—that it was *capable* of being much abused—that it had been *grossly* abused—that it had *actually ripened* in the mountains sixty miles north of New York, contrary to the opinion of sundry learned D. G.'s (Grape Doctors.)

*Specif. 3d.* That the defendant had

placed the Concord later than the Isabella or Catawba.

*Charge 2.* Wilful misrepresentation.

*Specif. 1st.* In this, that defendant had professed to give an account of the time of ripening of several grapes, and had stated that he would "take them in the order of their ripening," but did not do so.

*Specif. 2d.* In this, that he represented the Isabella to ripen earlier than the Delaware, when in fact it was defendant's duty to state that every kind of grape ripened from two to six weeks earlier than the Isabella, and that the Isabella did not ripen at all, and when it did ripen, was only *colored* and *called* ripe.

*Charge 3.* Lack of knowledge and incapacity.

*Specif. 1st.* Making statements of facts in regard to grape culture, which contradict theories of those who raise plants to sell, thus showing a want of knowledge of the tricks of trade, which is entirely unpardonable.

Defendant pleads as follows:

To charge 1, not guilty.

To *Specification 1st.* Defendant did use the words "model report," as a quotation from an eminent grape cultivator and writer named Mead: the phrase is not original with defendant. He admits that he wrote the article in question, and sent it to the editor of the *HORTICULTURIST* for publication.

To *Specif. 2d.* Defendant denies that any false pretences were made by him; on the contrary, he affirms that the facts are true of his own knowledge.

*Specif. 3d.* Defendant stated that Isabellas were "ripe enough to market on 17th September," but denies that he called them ripe before 30th. Concord ripened on 26th. He desires to say that he places the Isabella, when ripe, whether early or late, far ahead of the Concord.

To *Charge 2.* Not guilty.

To *Specif. 1st.* Defendant admits that he made the statement as charged, but denies that he had any intention to misrepresent facts. The article was written from notes

taken on the spot, from day to day, during the grape-ripening season. The dates are reliable. If they are not in the order of ripening, as was originally intended, he hopes to be excused, as grape pinching is more to his taste than writing for the press; "and therefore little shall I grace my cause in speaking for myself."

To *Specif. 2d.* Defendant denies that he has in any way been guilty of contempt of the Delaware. He avers that it did ripen with him on the 20th September, and he would have been glad had it ripened three weeks earlier, especially if he had had any plants to sell.

To *Charge 3.* Guilty—except that defendant's Isabellas, when ripe, were both *colored* and sweet, without the addition of saccharine.

The case was ably summed up, and the learned judge delivered the following lucid opinion:

"If the court understands herself, and she thinks she do," then this defendant is guilty on his own confession. Refer to his answer to charge number three. When a prisoner at the bar acknowledges his guilt, the court has no discretion but to pass the sentence of the law. It is usual for courts to make some remarks in such cases, even if it is only to let the people and the bar understand that she knows a thing or two. This is a case about grapes, and leads us to inquire why so many of the Doctors are grapeologists. Is it because grapes make wine, and wine makes men and women drunk, and drunkenness begets disease, and then the Doctor is sent for? Or is it that grapeopathy is to become the great cure-all—the universal panacea? Our common parent Noah, when he came out of the ark, planted a vineyard, and took too much of its juice, refusing to drink water, because so many sinful people had been drowned in it. But, is that doctrine tenable in these days of Bourbon whiskey and temperance? Noah's vineyards are growing all over the country; we need not plant others; that is the decision of this court.

As to the Delaware grape, let it remain

in its own native State. The complainant is guilty of a quibble when he criticises the words "take them in the order of their ripening." I know no other way to *take* grapes. Quibbles\* in clients are inadmissible; only *gentlemen* of the *bar* may indulge therein.

The defendant is adjudged guilty, and sentenced and enjoined to write no more for the press, until he learns how to mind his p's and q's. Further, he is ordered to pay a fine to complainant, (the informer,) of a bottle of his Isabella wine, vintage, 1858; to be sent through the editor of the HORTICULTURIST; but the said editor is forbidden to even *smell the cork*; and for furnishing the obnoxious words "model report," is condemned to pay the costs of this suit. The complainant is enjoined to raise nothing but pigs in Berkshire, until the climate is changed by act of legislature.

As to the HORT., postmasters are directed to suppress its circulation. It is an incendiary publication. People are running mad with its teachings. If they want fruit, let them go to the swamps for their grapes; to the roadsides for their pears; to the meadows for their strawberries. Why expend money and labor for what may be had for nothing? *Fiat justitia*; when the sky falls we shall catch larks. The court's adjourned.

Mr. Editor,—I send you a "model report" of the case tried in our court.

LAMECH PHOGEE,

*Son of Methusaleh, Esq., C. P. C.*

[Well, Pratiquer, it seems that we are all in for it this time. You are forbidden to write, and fined a bottle of wine. Berkshire is condemned to raise pigs; and we are to pay costs, and prohibited from "smelling the cork." You must go to work and learn your p's and q's "right off," for we can not spare your pen. Your fine was paid promptly. The bottle came to hand in good order; but the cork was wired in such a peculiar manner that we felt curious to see how it was done;

and while trying to unravel the mystery *the cork came out*; but we didn't smell it. All we know is, the bottle leaked badly after the cork came out. We are sorry you were not here, Berkshire, for it was real good. We must compliment Lamech for the faithful manner in which he has reported the proceedings in court. They are without a parallel.—Ed.]

MESSRS. EDITORS,—It gives me pleasure to say a word of the growing interest in horticulture in this vicinity. Even in our utilitarian village, where bricks and mortar mostly greet the eye, the change within a few years has been quite apparent. The owners of a few feet of ground have caught this progressive spirit, and now, where formerly only weeds luxuriated, to annoy the sight, and afford a lurking place for venomous or disgusting reptiles, even these few feet have been reclaimed, and, instead, a choice dwarf Pear-tree, a Grape vine of the best quality, or some other choice variety of fruit, has been substituted.

In the place where half a dozen hills of potatoes or corn were formerly cultivated, we now see a fine bed of luscious strawberries, affording many quarts annually of this most delicious fruit. It is not an unusual sight to see on the narrow strip of land extending along the shady side of a bordering fence where the vivifying rays of the blessed sun are not allowed to penetrate—a border so narrow that there seems *no room* for vegetation of any kind—long rows of healthy raspberry canes, currant or gooseberry bushes of the choicest varieties, literally *weighed down* with their beautiful and excellent fruit. So with the vine; where there is room for a hill of beans or a cabbage, even a foot or two of soil, beside some outbuilding or old fence, the depository of rubbish heretofore, the autumn season now discloses numerous beautiful—I may almost say *irresistibly tempting* clusters of our own choicest grapes. In fact, a *general* feeling of progressive horticulture pervades our village,—and little village lots of a few square feet only of ground are made to "bud and blossom as the rose." This, as I have

\* This is a Cockney name for sweetened wine; a wine Sangaree is called a Quibble.

said, is the case in our compact village; in the suburbs and adjoining towns on either side of the river, the change is still greater. Where once the greatest ambition of the fruit grower was to produce *showy fruit*, regardless of quality, now none is considered worthy of cultivation but the *very choicest*, and *such only* will they cultivate. Hardly a man can now be found among us, who is so "old foggy" in his notions, that he will consent that a tree, plant, or vine should be set out for him, except in the most approved manner. The old "post hole" system of setting out trees, etc., is done away with, and now in employing a man for that purpose, not the one who will *plant* the greatest number per day is selected, but he who does his work the best; nor is the plant, after being properly placed in the ground, left to take care of itself, but, by constant attention, it is nourished and brought to as great a degree of perfection as possible. The result has been fine healthy plants, and an abundance of *such fruit* as was exhibited at our Horticultural fair in September last; than which, I venture to say, no exhibition of ten times the extent of territory ever made a more beautiful display.

These are the effects Horticultural societies are producing among us—marked, positive. Croakers, who once predicted "no good can come out of Nazareth," are beginning to succumb, and falling into the ranks, acknowledge that such societies are of *some* benefit to the community.

It would be unjust did I not acknowledge that our first interest was awakened to the subject by the perusal of Horticultural books and periodicals, particularly your own magazine, the "HORTICULTURIST," started by our own townsman, A. J. Downing, (deceased, 1852,) nearly seventeen years ago, and conducted with ability from that to the present time. Many in this vicinity have now in their libraries, complete sets of the work from the commencement, and which they consider their most reliable work of reference on the subject; and others, to my certain knowledge, would complete their sets were the numbers obtainable.

Pardon me, Messrs. Editors, for taking upon

me a task that *belongs* to abler and more experienced hands; but inasmuch as others *do* not attempt it, a *poor word* by way of encouragement is perhaps better than none.

Newburgh, April, 1863.

D. SMITH.

[We are always glad to hear of the success of Horticultural Societies. If you would succeed and become a great society, put your heel on petty jealousies the moment you see them. They ruin more societies than all other causes combined.—ED.]

MESSRS. EDITORS,—Permit me the use of a little nook in one of your columns, to answer many inquiries which have been addressed to me recently in regard to the Hale's Early Peach.

This variety originated in Summit Co., this state, about twenty-five miles south of this, and coming under the observation of Mr. Hale, a nurseryman in that vicinity, he propagated from it, and introduced it to the public, about four years ago, I think. The original belonging to a German, he designated it for a time as the Early German; but his professional friends feeling that Mr. Hale was entitled to the credit, named it Hale's Early, to which he acquiesced, and by which it is now universally known. I neglected, at the time I had them on hand, to make a note of their special particularities, and can only give them comparatively. It takes freely in the bud, and is a good healthy grower; ripens up its wood well in the fall, and is consequently hardy. It is a very early bearer, often bearing good crops the second year in the nursery row, and said to be a prolific bearer; mine were too young to determine upon last season. The curled leaf was *very* bad in my orchard last season; they suffered, in this respect, more than some, and not so much as others. I had no Frith's Early Bearing. My Early Tillotson mildewed so badly as to cast all their fruit, so that the Serrate Early York was the earliest common variety. The trees of these, and all my other varieties, were three to four years older than the Hales. The first ripe sound fruit was picked ten days earlier than

the E. Y. Serrate, and sixteen days earlier than the Large Early York or Honest John. The fruit was about the same size, shape, and quality as the Honest John, but somewhat more highly colored. They hang well on the tree, (if they can get the chance,) and showed no indication to rot. There is but one opinion as to their value here, as the demand at the nurseries clearly shows.—Yours very truly,

EDWARD TAYLOR.

Cleveland, O.

[The testimony in regard to the value of Hale's Early seems to be very uniform. Mr. Taylor's letter was received only a few days after one already published on the same subject, and to the same purport.—Ed.]

MR. EDITOR,—My attention was called two or three years since to a raspberry growing "on its own hook" in my father's garden. It first fruited in '59 or '60, and bids fair to merit extensive cultivation. The quality of the fruit is of the *best*, and at least equal to the Brincklé's Orange in flavor. The fruit resembles the Orange very much in form and color, although considerably larger than that variety, as grown by me. The chief merit of this vagrant is its hardiness. It has never had the least winter protection except snow, and that does not drift over it, yet it has never shown any bad effects from cold. I removed a few suckers last spring, and planted them in my garden. I have left them, together with a few of the Orange, uncovered. I am sure to lose my Orange, but I want a true test. I will give you the result in the spring. Nothing is known of its origin, and I believe it to be an accidental seedling. Its bearing season last summer was ten days or a fortnight longer than that of the Orange.—Respectfully yours,

M.

Brunswick, Me., Dec. 16th, 1862.

[If this letter had not been so long delayed, we should ask you to send us a plant. It being too late for that, have the goodness to send us some of the fruit. Please let us know how the plant wintered. A hardy Raspberry as good as the Brincklé will be a great acquisition.—Ed.]

MR. P. B. MEAD,—*Dear Sir*,—Your March number is acceptable. I am somewhat interested in horticulture, and am often edified by your pages, and from time to time feel an inclination to put queries to you, as well as to contribute a little "gossip," but so far have resisted. Your "thirty-nine articles" on Orchard Culture opens up a subject of much interest, and in which I am experimenting. Have you any experience in renovating old orchards, trees eighteen inches in diameter, which have lost here and there a limb? What is the best way to stop decay around such wounds, where your predecessors have neglected them? In *orchard culture* of old trees, how many inches in depth should you plow *under* the trees, annually? Do you deem it injurious or otherwise to let hogs run in the orchard after the apples begin to drop? Will the disturbance of the soil by the "rooting" of the animals prove injurious to the trees? In training young apple trees, at what height would you have them to branch, where their habit of growth is horizontal rather than vertical? as in the Wine-sap, Smoke-house, and Rhode Island Greening. Where trees, here and there, in an old orchard, have died, and all vestige of their stumps disappeared by decay, is there any impropriety in setting out young trees on the sites of the old ones? How deep do you advise the soil to be disturbed (in planting apple trees) below the lower roots of the young tree?

I fear I have intruded too deeply on your time and attention; yet, it would certainly be a favor, duly appreciated, if your April number contains a reply.

Very respectfully yours,

WILLIAM PROCTOR, JR.

Ninth & Lombard sts., Philadelphia, }  
March 2d, 1863. }

[We regret very much that the above queries were not answered in the April number, as requested, but the letter got out of sight, and has only just turned up. We give the answers now, though they would have been more useful if they had been given before. We have had a good deal of ex-

perience in renovating old orchards, and have several on hand now. Old, decaying wounds we cut out till we come to live bark or wood, wash clean, and cover with shellac; but the grafting wax described by Horticola is much better. We have sometimes stopped up holes with cement, and with advantage. You may plow under the trees from four to six inches deep, but not deeper. We do not deem it injurious to let hogs run in the orchard, if the trees are not young; but we should only let them in when the apples are falling. Trees of a horizontal or spreading growth, like the Rhode Island Greening, should branch three or four feet high; while those of an upright growth should branch not more than two feet high. There is no impropriety in setting out young trees under the conditions named, provided the soil is well broken up, and some fresh earth added to it. We have never had any want of success, however, by simply stirring the soil well, and adding muck treated with lime. We do not know that we understand your last question rightly, but in planting young trees we prefer to have the soil stirred to a uniform depth all over the orchard; say not less than twenty inches. If this is not done, the soil should be loosened not less than ten inches under the lower roots, and for a distance of four to six feet all around the tree. We always answer questions cheerfully, and do it promptly when it is possible.—Ed.]

MESSRS. EDITORS:—According to some of your correspondents, in whose “nuts,” and “cracking of nuts,” I have been much interested, it is not safe to have any wood in the borders of grape vines, lest that ubiquitous enemy of the animal and vegetable kingdom, MOLD, may attack the roots. From others, I have learned that leaves are an excellent mulch for the strawberry and the raspberry, and my own experience verifies it. Why should it not be an equally valuable mulch for other kinds of fruit, including the grape? We are told a great deal about nature and imitating nature; would it be a mulch contrary to nature? On my native

hills, and they are hills indeed, Nature mulched her vines with a liberal coating of leaves; and she was not particular in removing the sticks, and the rotten wood of past centuries. Did she err? If so, it would seem that those wild, untutored vines, who had not learned the rights and privileges of civilized vine-dom, also erred; for they were strangers to mold, and to all the cryptogamous family. Indeed, they were ignorant of the botany of the cryptogamia. But if there is danger about leaves as a mulch, I want to know it; and if there is no danger, I want to know it. Perhaps Nature may be sowing her spores with a more liberal hand, and what was may be no criterion by which to judge of what now is.

QUÆRO.

[Leaves are a most excellent mulch, and you can use them freely. We have used them for many years, and value them highly. If there were any thing particularly injurious in them, as some would have us believe, our noble forests would have disappeared long ago. But there is nothing in them that *should* prove injurious, but quite the reverse.—Ed.]

MY DEAR MR. MEAD:—Not long ago Captain BRINKERHOFF, the U. S. Assistant Quartermaster at this post—and a more worthy man does not wear shoulder-straps, of any rank—came into my office, and wanted to see the January HORTICULTURIST. On learning that I kept them, and had the back volumes, he wanted to have the use of the volume for 1862, for he had been in the service more than a year, and had not had an opportunity of seeing it. I don't know that I was ever more gratified at being able to confer a favor than I was at that time; and it did me good to talk with this military man, who had in his breast all his former love for the country and rural pursuits, hear him tell of his home and his garden in Ohio, and express so much delight at the thought of again returning to them when the war should be over. I thought it another proof of the strong attachment which men have for the pursuits of horticulture and country scenes, an attachment which no separation from them, or no engagement in other pursuits can obliterate,

and also another proof of the universality of that genial and harmonizing influence upon character, which an attachment to such pursuits always promotes. I think, could you have been here at that time, you would have been more than ever satisfied with your labors as editor of the HORTICULTURIST. May its shadow never be less!

Truly your friend,

Augusta, Maine, March 4th. S. L. B.

[Thank you most heartily. We shall cherish this most gratifying incident as long as we live. If we have done any the least thing to inspire such love of rural pursuits as this, we have not labored in vain. If this should meet the eye of Captain Brinckerhoff, we beg that he will send us his address at the time. If we were President, we would make him a Major-General of volunteers; but as we are not, we make him a Major-General of horticulturists; and let this be his commission.—Ed.]

MR. EDITOR,—About a year ago I wrote to you of our Horticultural Society, of its origin, its encouragements, and its hopes. Now I have the gratification of saying to you, that those expectations were more than realized in our fall exhibition. While other kindred societies were lamenting the falling off in their receipts, and *general* want of interest, ours, we are happy to say, was *liberally* sustained. Our enterprising ladies, of whom the society could boast a large majority of names, by their connection with the society, and by

their generous contributions, some extremely beautiful and unique, rendered us efficient service, for which all thanks. The sterner sex, not to be out-done by the fairer portion of the community, came boldly up to the work. Our *large-hearted* men—men of *taste* as well as means, rendered us liberal support, both by *encouraging words* and *princely* contributions from their extensive well-kept gardens and orchards, and a very interesting time we had, I assure you. But it is unnecessary to mention to you these things, for you were present, and of course had an opportunity of judging for yourself; but to those who were not, especially those in our immediate vicinity, I would say, you lost a great treat, a feast at least to the eyes, of those things that make life's voyage a pleasant one; such, in fact, as life's short history furnishes but few examples.

We have now again buckled on our armor for the conflict, with courage equal to every contingency; and with the continued favors of our enterprising men, and the approving smiles of the fair, we hope this year to be able to show a marked advance on previous years, in the extent and beauty of our exhibition, and the *general utility* of the society.

And now, Mr. Editor, for your kindly interest in our society the past year, accept our thanks.

Hoping for a continuance of the same, I remain yours truly,

D. SMITH.

[You did handsomely, and we are glad to see a determination to do even better. You can rely upon our continued interest.—Ed.]



THE  
HORTICULTURIST.

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VOL. XVIII.....JULY, 1863.....NO. CCV.

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Hints on Grape Culture.—XXVII.

WE next present some additional remarks on lengthening the arms, disbudding, &c. The illustration on p. 74 is on too small a scale for a detailed explanation, and we have therefore prepared one much larger. The object aimed at is to lengthen the arm and secure a stout spur at the point of elongation. We have already explained how this spur may be formed from the base bud. We propose, however, to describe another mode of doing this, by which the arm is lengthened and the spur formed at one operation, thus gaining something in point of time; besides, the arm will present a neater appearance.

On the newly formed arms, and, indeed, on all vigorous young wood, two or more shoots will usually proceed from the same bud. Two such shoots are very common, and three nearly as much so; indeed, we have sometimes seen as many as five starting from the same bud, the central one being large, and the others quite small. These surplus shoots are to be disbudded, or rubbed off, retaining only the one which is strongest, and that is generally the middle one. Where only two shoots start from the same bud, they are usually about the same size, and there is but little choice as to which shall be retained. The disbudding

should be done as soon as the young shoots have fairly broken from the bud, or as soon as they can be well distinguished, and before the leaves have expanded. The process consists simply in pressing them aside with the thumb or finger, when they will usually snap off. It is not advisable, however, to remove these shoots until the vineyard has been dressed and the vines tied to the wires, lest some accident should destroy some of those which remain. A vineyard should be dressed before the vines begin to break; but as this is not always done, it is better to defer the disbudding till it has been done. The disbudding should not be omitted, though the shoots should have grown a foot long. The surplus shoots are useless for any practical purpose, interfere with the proper training of the vine, and waste its energies to no purpose. When left till they are several inches long, more care is necessary in their removal than when they are small. It should be made an object, therefore, to remove them as early as possible.

We will now explain how we take advantage of these adventitious buds to lengthen the arm. *Fig. 1*, here given, is the end of the arm which it is proposed to lengthen. It answers to the first *o* in the figure on p.

74. There are three shoots, *a*, *b*, *c*, proceeding from the bud, the central one, *b*, being the largest. The shoot *a* is rubbed out; *b*

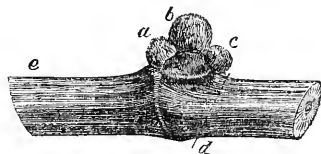


FIG. 1.

is retained to form the upright shoot for the spur; and *c* is trained out nearly horizontally to form the continuation of the arm. The shoot *b* is to be stopped when it reaches the third wire. The shoot *c*, though not the strongest at the start, will soon, from its position, lead the sap, and become stouter than *b*; and the result will be considerably enhanced when *b* is stopped. The shoot *c*, toward the end of the season, is gradually bent down to the lower wire, and tied there. At the same time, a string must be tied firmly around the arm on each side of the shoot *b*, so as to have the arm as straight and neat as possible. About the first of June, or when the shoots are about a foot long, the end of the old wood must be cut off at the dotted line *d*. This should be neatly done with a sharp knife. The cut should be at an angle of about 45 degrees, and on the upper side should come close up to the shoot *c*. Unless carefully done, there is danger of cutting this shoot entirely off. This pruning should not be neglected; and if not done early, as it should be, it must be done late. The result of cutting off the old stump thus close and early will be, that the new growth of *c* will gradually push over the end, and give the arm the appearance of having all been made at one time. There will be a small swelling at this point, which in a year or two will hardly be seen. This swelling or protuberance, slight as it is, will somewhat retard the flow of the sap at this point, to the decided advantage of the vine.

*Fig. 2* shows the appearance of the arm as pruned the following year, only a part of the spur being shown. *a* is the spur

formed from the shoot *b* in *Fig. 1*. *c*, *c*, *c*, are base buds. *b* is the continuation of the arm formed from the shoot *c* in *Fig. 1*. *d* is the little stump or scar left by cutting close up to the shoot *c* in *Fig. 1*. This scar will gradually disappear, its disappearance being hastened by nicely paring it away with a sharp knife while the vine is growing. Taking a vigorous vine, we can, even at the end of the first year, show the continuation of the arm with scarcely a vestige of a scar; but this requires frequent and skillful applications of the knife.

We have now described a very neat and certain mode of lengthening the arm and forming the spur. We can rely with much certainty upon at least two shoots proceeding from the bud at the end of the half-formed arm; when this is not the case, it may be taken for granted that the vine is not in strong condition. If, however, one shoot only should appear, we must either go back to the next bud, or proceed in the usual way, and form the spur from the base bud, or the one immediately above it. Other modes of forming arms will be described hereafter, but none so good for the vineyard as that already noticed.

A word or two may be added in regard to the removal of the tendrils. These do not abstract materially from the strength of the vine, and no particular stress need be laid upon their removal; still, we prefer to have them off, and advise their removal when the labor can be afforded at the time. They give support to the vine, it is true; but tying is nevertheless indispensable to

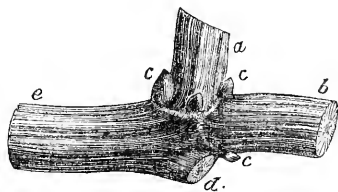


FIG. 2.

secure the shoots in their proper places. As a general thing, more time is consumed in cutting away the hardened tendrils at

the winter pruning, than is required to remove them when young and green.

Something, too, may be said about tying up. The young shoots of the vine are very tender and easily broken. The beauty, as well as value of any good mode of training, depends much upon the integrity of its parts. If any portion be lost, its beauty is marred and its value so much impaired. Tying up the young shoots of the vine, therefore, becomes a matter of much importance, and should not be neglected. Where the vineyard is well sheltered from strong winds, the labor of tying up will be considerably lessened. The tying should begin when the shoots are from six to ten inches long. An expert hand will go over a good many vines in a day. In the trellis formerly described, the wires are about fifteen inches apart. In this case, the first tying will be done by placing a loop under a leaf-stalk, and securing the other end of the string to the wire. At the second tying, this string may be cut, and used for tying the shoot to the wire. No other tying will ordinarily be needed till the shoot reaches the next wire. The two middle shoots, or "safety valves," may be tied together as they grow, so as to take up as little room as possible. They should be carried up on the back of the trellis, where they will be but little in the way. This is the principal tying to be done

in the vineyard, after it is established. A little experience will teach one to do it rapidly and well. The outside rows should be tied first, as they are most exposed to the wind. The shoots should not be tied tight to the wire: a little play often saves damage to the leaves in a heavy wind. The only troublesome part of the tying is the first, when the loop is directed to be used. If we should wait until the shoots had grown fifteen inches, and could be tied at once to the wire, we might lose some of them from heavy rains or winds. As the first tying is important, it saves some labor to run quite a small wire about six inches above the bottom one. The young shoots can then be tied at once to the wire, and more securely than by the loop. It is only necessary to place the small wire between the first and second, and third and fourth wires. A good substitute for the small wire may be found in strong twine tarred and sanded. It is cheap, and will last for a number of years. The material used for tying should be soft and pliable. The best thing, but not always the cheapest, is bass, which should be soaked in water before being used. Young willow twigs, marlin, cotton twine, &c., are all good, and each one may select that which he can get cheapest.

We shall probably, in our next, take up another system of training.

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## COUNTRY HOMES.

BY GEO. E. WOODWARD, ARCHITECT AND CIVIL ENGINEER, 37 PARK ROW, N. Y.

THIS design is intended to cover, at a low cost, as much comfort and convenience as a moderate sized family would require, and to place the same, as much as possible, on one floor. The cellar or basement kitchen is dispensed with, and only enough cellar room provided to meet the wants of those who occupy suburban places of 3 to 10 acres. Where large quantities of vegetables are stored, or cellar room is required for farm purposes, we think it better to build cellars separate from the residence, believing it to be more

healthy and desirable. For the preservation of meats, milk, etc., in warm weather, a refrigerator, or, better still, an ice closet, can be taken off one end of the laundry. This can be supplied with ice through an outside door, and is infinitely better and more convenient than a cellar or spring house.

The kitchen has no fire-place, but is provided with a ventilator in the chimney near the ceiling. The cooking is done by a stove, which, if properly contrived, is one of the best of ventilators, and preferred by many for all

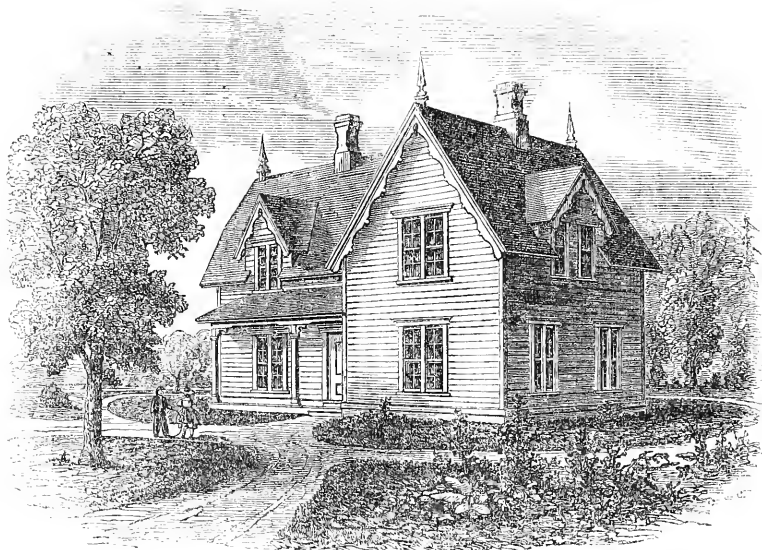


FIG. 19.—Elevation.

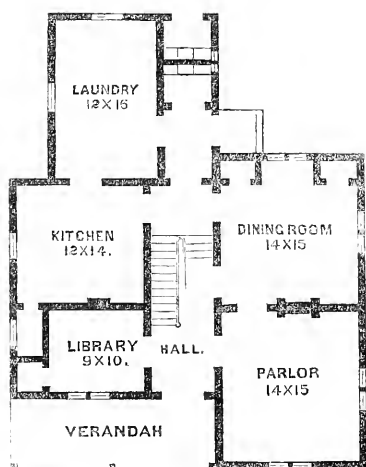


FIG. 20.—First Floor.

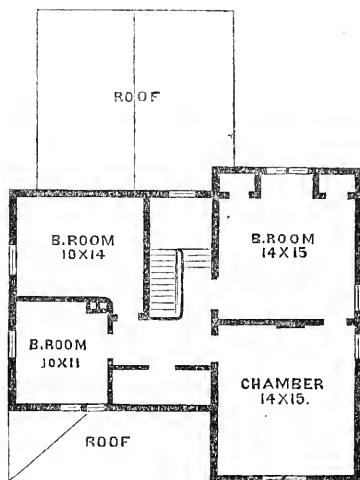


FIG. 21.—Second Floor.

kitchen purposes. A range can be placed in the chimney if desirable, or a fire-place, if it should be considered indispensable. A door under the stairway separates the front and

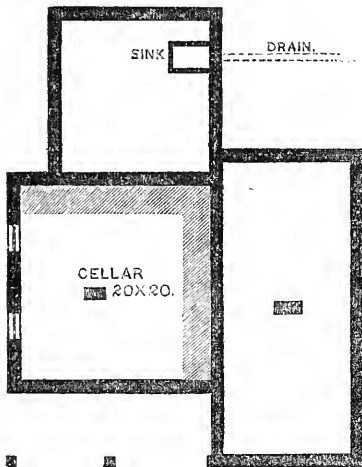


FIG. 22.—Plan.

rear hall, and disconnects the kitchen apartments from the rest of the house. All doors opening into the rear hall should be hung

The closets in dining-room are finished to give an interior appearance of a bay window. The dining-room and parlor, and the two bedrooms over, are intended to be heated by an Etna heater placed in the chimney, thus warming four rooms at pleasure by one fire. A small stove in the library will keep that comfortable, or the whole house may be heated by any of the approved modes of heating by hot air, water, or steam.

The second floor gives four bed-rooms, and might be so enlarged as to convert the large closet at the end of the hall into a bath-room.

We prefer to leave all changes to the taste or wants of the reader; for us to put on extras now would defeat our purpose, which is to show how good and perfect a house may be made for a stated sum; not one that we think the building might be erected for, but one for which we are prepared to actually construct it in any average locality within 60 miles of New York. It is an easy matter to double the expense of such a building by adopting an expensive manner of construction, elaborate finish, and extensive plumbing and heating appliances. All this will come

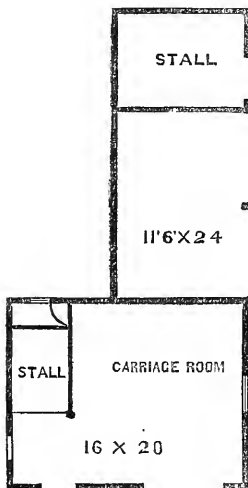


FIG. 24.—Plan.

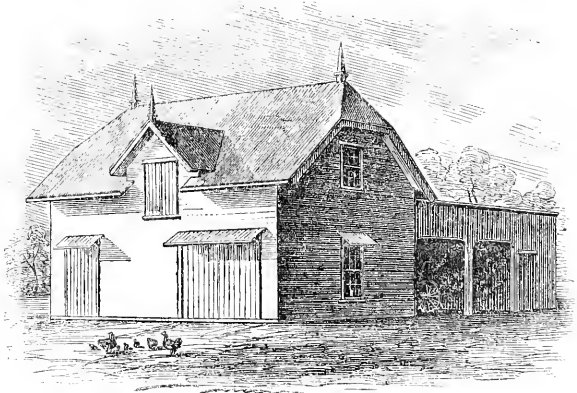


FIG. 23.—Elevation.

with the new spiral spring butt, the best door-spring that has come under our notice. It is entirely concealed, and works without a fault.

in its place, and be shown in future designs, as we advance in the scale of prices. The cost of a building erected after this design, well finished, would be \$3,000. This does not presuppose,

however, that a novice can execute the work, for this price; the chances are that his ignorance of the value of building materials, labor, and the best manner of working both to the best advantage, will cost 50 per cent. more money. Fig. 23 shows a design for a cottage stable, giving accommodations for a horse and cow, two carriages, one or two wagons, and

two tons of hay. The main building is so proportioned, that three more stalls may be added, and it may then become the wing of a larger building, to be used for carriage room and other purposes. For those who keep but one horse and cow, this design affords abundant room, and it can be erected in these high-priced times for \$350.

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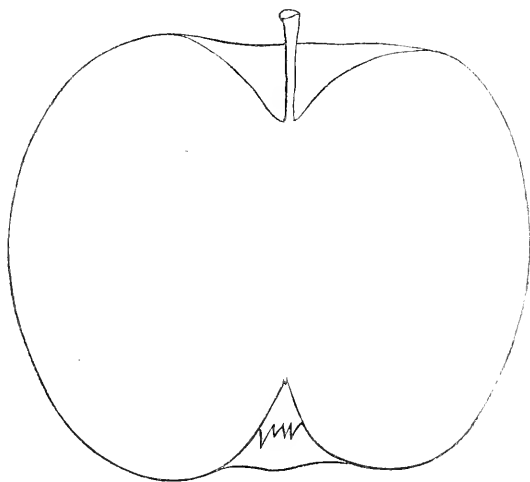
### GRIMES'S GOLDEN PIPPIN.

BY A. G. HANFORD, COLUMBUS, OHIO.

MEDIUM size, roundish, flattened. Skin thin, of a golden yellow, with splashes of thin russet, and fine dots of darker russet. Very uniform in size. Flesh yellowish white, fine grained, tender, crisp, juicy. Flavor

tunity of thoroughly testing the quality of the fruit.

The original tree, when it died three or four years ago, was about sixty years old. No apple with which we have become re-



GRIMES'S GOLDEN PIPPIN.

mild, agreeable, sub-acid. In use from January to March.

Tree is very hardy, a fine, handsome grower, both in the nursery and orchard; an annual bearer, and very productive. It originated on the farm of Thomas Grimes, Broom Co., Va., and was introduced into Ohio by Samuel Wood & Son, of Jefferson Co., to whom we are indebted for the oppor-

tunity of thoroughly testing the quality of the fruit.

cently acquainted has pleased us more than this, and we believe it deserving of extended trial.

[We are obliged to you for the outline and description of Grimes's Golden Pippin. We should very much like to see specimens of the fruit when the season arrives.—Ed.]

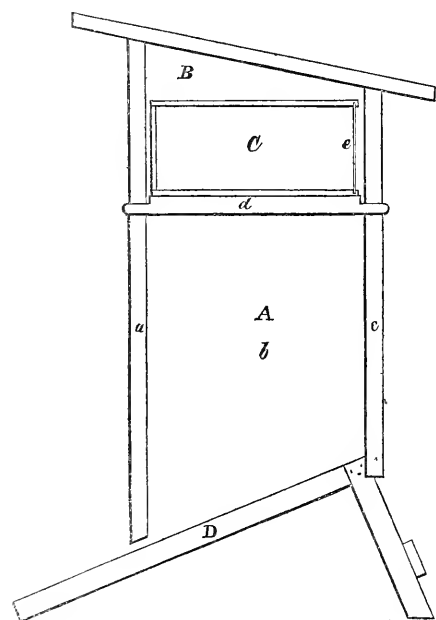
# THE BUTTERFLY BEE-HIVE.

BY J. W. B., INDIANAPOLIS.

MR. EDITOR:—Agreeably to request, I herewith send a diagram and description of hive known here as the Butterfly Bee-hive.

The bottom board, *D*, is 15 inches wide, and 22 inches long, the bottom end resting on the ground, the back end supported by legs nailed to the edge of the bottom board.

The home of the bee, *A*, is 12 inches square on the inside, 13 inches high on the short side, and contains 2,000 inches; the proper size for any part of the country. The front, *a*, is 12 inches wide, and is nailed between the sides, and cut half an inch short to form entrance for the bees.



BUTTERFLY BEE-HIVE.

The sides, *b*, are 13 inches wide, and cut beveling at the bottom, to rest on bottom board, nailed to edges of front, *a*.

The back, *c*, is 14 inches wide, and 15 inches long, the bottom end running below the edge of bottom board, to hold the hive in its place. It is nailed on the edges of the sides. For convenience, there may be a glass, 8 by 10, placed in the back, covered by a door of any form to suit the fancy of the builder. I make mine of tin, and pass a wire through the top edge to form a hinge, and hang it by driving a small staple across the wire at each end, and fasten the bottom with a small button.

The top board, *d*, is rabbeted around the edge on the top, (as shown in the diagram,) to prevent the water running into the hive.

The outside cap, *B*, is made as per diagram, the top projecting to form roof for the hive.

The surplus honey box, *C*, is made in one or two parts, the one in diagram being in one box, holding, when well filled, 25 pounds of honey, the communication between it and the hive being through slots, 1 by 8 inches, cut diagonally through top board, *d*, and bottom of honey box. *e* is a glass placed in the honey box to ascertain when it is ready to take away, which may be done as often as it is filled.

As I have already transgressed on your time and space, (if you see fit to give this a place in your publication,) I will leave the Butterfly to the inspection of your many readers, hoping some one will give it a trial, and report his success. If it is agreeable, I will give you some remarks on the management of the hive, at some other time.

[We are much obliged to you for the diagram. There are some features about it with which we are much pleased. We hope some of our readers will make a Butterfly Hive, and give it a fair trial. We shall be very glad to have your remarks on the management of the hive.—ED.]

## LANDSCAPE ADORNMENT, No. XXIX.—ORNAMENTAL ROADS.

BY GEO. E. WOODWARD, CIVIL AND LANDSCAPE ENGINEER, 37 PARK ROW, NEW YORK.

THE principles of road making on private estates in this country are but little understood, and there are not enough fine examples of first-class roads to make men ambitious of excelling in this respect. The progress of improvement, however, is very apparent, and a better class of ornamental roads is being demanded. The worst feature has been the bad locations that have been made, oftentimes spoiling that which an accomplished landscape artist would have made a really fine thing. A proper location of an ornamental road adds to it, we may say, all of its character and importance, and it may be made in inexperienced hands a very tame and meaningless affair. To locate and make a road that shall fulfil only a useful purpose is one thing; to so locate it that it shall comply with all the requisites sought for in ornamental grounds, is quite another matter. Whatever there is of consequence should be made the most of, and by the most graceful and easy lines of curvature should destroy the thought that any thing of the kind was

intended. The entrance, the perspective view of dwelling, the easy grade, the drainage, construction, planting, etc., are only thoroughly considered by those of extensive practice. It deserves a careful study, and should be executed by skillful hands. Its construction is in a great degree mechanical; the location is an artistical matter; a simple, easy pastime, apparently, in the hands of a finished expert, executed rapidly, exactly, and handsomely, but the result of years of practice, and the solution of many intricate problems.

The construction of ornamental roads is a matter we wish more particularly to consider in this article. Where the proper materials for road metal can not be had, or where expense is to be avoided, the earth road must be adopted. To make this is an easy matter, thorough drainage, wherever necessary, should be most carefully done. The bed of the road should have a crowning of about 4 inches, in a width of 16 feet, or  $\frac{1}{2}$  inch to a foot, both ways from sides, as shown in fig. 1. The sods at the edge should be kept

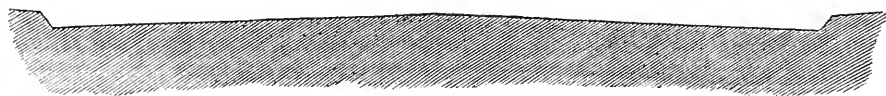


FIG. 1.—EARTH ROAD.

low; not over  $1\frac{1}{2}$  inches high, except in such cases as where surface drainage crosses the road, and is liable to wash earth on to the lawn. The grade line in the direction of the

road should be kept as regular as possible, and avoid undulating. On the surface of the road, gravel, coal ashes, oyster shells, or similar materials, may be placed to good

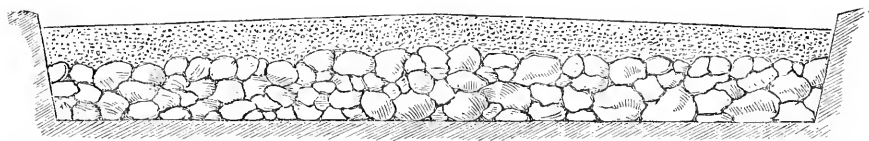


FIG. 2.—GRAVEL AND STONE ROAD.

advantage, and will make good roads through all the dry seasons. The making of an earth road similar to this is in all cases necessary where the road bed is to be stoned, except that it is taken out to a greater depth. Some

writers, and many practitioners, recommend making stone roads of from two to three feet deep, deeming it of much importance to keep below the influence of frost; but this has been shown, by the best authorities on road



making, to be a complete fallacy, a waste of labor and money, unnecessary in practice, however good it may be in theory. The most common mode of making a stone road is after the following manner, shown in fig. 2. Stones of unequal size are laid in, or usually thrown in, to a depth varying according to the builder's notion, generally one foot and over, and covered with 4 to 6 inches of gravel. The chief objection to it is, that it requires a larger amount of excavation; if the stones are not carefully hand-packed and rolled, they are liable to work out on the surface; heavy loads, as coal, hay, manure, etc.,

will cut them up, and weeds will grow thickly and rapidly. In a park, on properly constructed roads in constant use by light carriages, these objections would have no weight. Still, by a greater expenditure of labor in keeping them in order, such roads, when well made, answer a very good purpose; but as an investment they are not so good as other kinds that do not require so much care. The first cost is less than broken stone roads. They should not, under ordinary circumstances, exceed 10 inches of thickness of stone and gravel.

Fig. 3 illustrates the manner of construct-



FIG. 3.—TELFORD ROAD.

ing the Telford road, a valuable and well-tested plan, good in all localities where stone can be had, and admits of a softer and inferior quality of stone being used in the pavement. Telford approved of a level cross grade instead of a convex surface. Hughes, a later author, declares the convex line to be the best, which it undoubtedly is. This road is made by first setting a rough pavement of stone, as shown in fig.

3. The projections of the upper part are broken off with a hammer, and the interstices are packed with stone chips or spawls. On this pavement is placed two layers of road metal, and the whole is covered with gravel or some other good binding material. The whole thickness for an ornamental road need not be over 10 to 12 inches.

Fig. 4 shows the manner of making the McAdam road. This consists entirely of road



FIG. 4.—MCADAM ROAD.

metal; that is, stone broken to a cubical form of  $2\frac{1}{2}$  inches, and put on in three layers, each of which is worked together by carriage wheels, and the final surface made smooth by constant use. It becomes in time a solid, compact, impenetrable body, the stone unit-

ing by its own angles, aided by the dust ground from them by constant use. This class of road-making is not adapted for private estates, in consequence of the time and use required to make the surface smooth; and the fine dust is objectionable. It is the man-

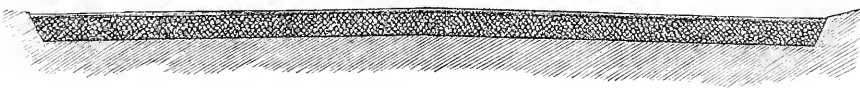


FIG. 5.—BAYLDON ROAD.

ner in which materials are combined that characterizes the different classes of broken stone roads, not the fact that the use of broken stone is alone peculiar to the McAdam

plan. To call all roads macadamized that are composed of a regular size of fractured stone would not be fair to the inventor, as he explicitly states, under oath, the manner in

which his system of road-making is performed. The use of broken stone in road-making dates back many generations. The great roads of China and Sweden are examples.

Fig. 5 is a cross section of what is known as the Bayldon system, and is, we think, the most superior manner known of constructing either public highways or private ornamental roads. It consists of a layer of road metal 6 inches in thickness placed on in one solid body, thoroughly rolled, and covered with about  $1\frac{1}{2}$  inches of blending material, good gravel being the best. We have, however, in an extensive practice, built these roads with a layer of road metal of 4 to 5 inches thick, and with just gravel enough to finish the surface even, one of which, after five years of constant use, does not appear to have failed in the slightest particular. It has through all seasons presented a hard, smooth, handsome surface. This system of road-making requires the least quantity of excavation, and can be made ready for use at once. Its construction is the simplest of all modes, and its durability and efficiency have stood a test of 30 years.

The prevailing impression is, that the stone and gravel road, fig. 2, is the cheapest to construct; a very doubtful matter, we think, compared with the Bayldon plan. One thing is certain, however, that to keep the stone and gravel road in polished order, in private

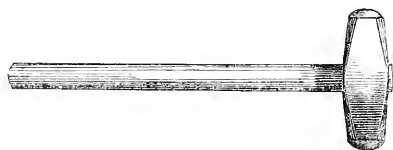


FIG. 6.

estates, requires at least four times the care; and if a little is saved in first cost, it is soon balanced by additional expense. Where

economy in building a good road is to be considered, the stone might be broken at leisure intervals through the winter, and by those unfitted by age or misfortune from doing the work of able-bodied men. The stone is broken with a steel hammer weighing about  $1\frac{1}{4}$  lbs., see figure 6. The stone breaker sits at his work, and soon becomes very expert. Some use long-handled hammers, and stand up, but can not accomplish so much.

Where it becomes necessary to form gutters, we think it best to do so with quarried or fractured stone put together in the usual manner of making a pavement. See fig. 7.

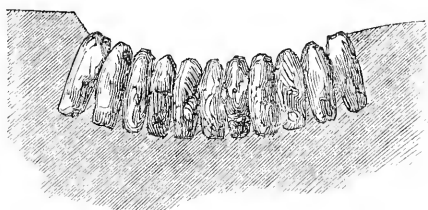


FIG. 7.

The advantage is, that the gravel may be raked in a thin layer on the gutter, (which is always unsightly,) and the ragged edges of the stone will hold it, and prevent its being washed. Cobble stone gutters answer a good purpose, but can not be so easily concealed.

The most economical of all modes of locating and building roads, or of doing any other class of work to which one has not been specially fitted or educated to practice, is to obtain the services of those most competent and reliable, pay them the price which skillful men always command, require them to do their work well, and the result will invariably be satisfactory. It is cheaper to pay some one to save money for you, than to find out, after you have done your own work, that you might have had a very much better thing for several hundred dollars less.

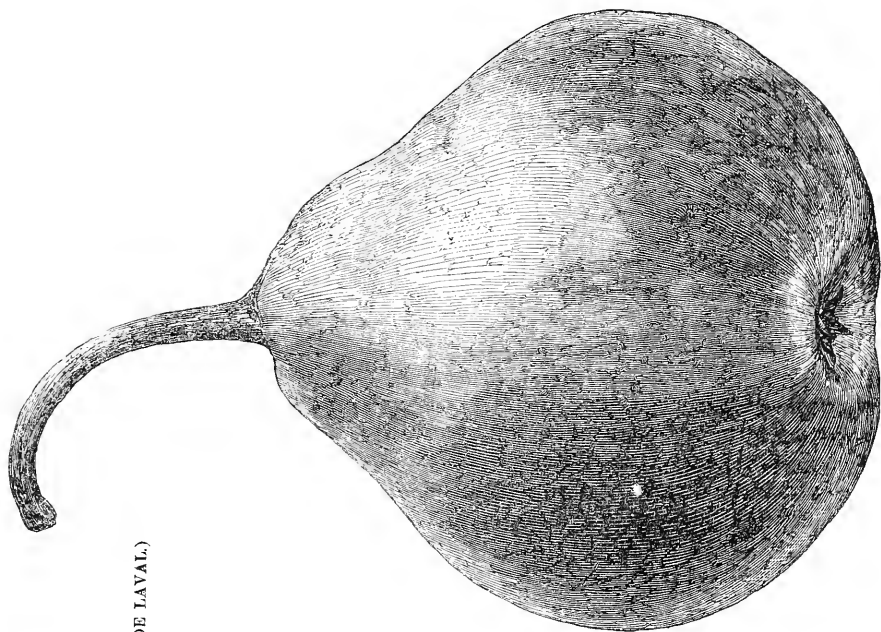
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LEON LE CLERC PEAR.

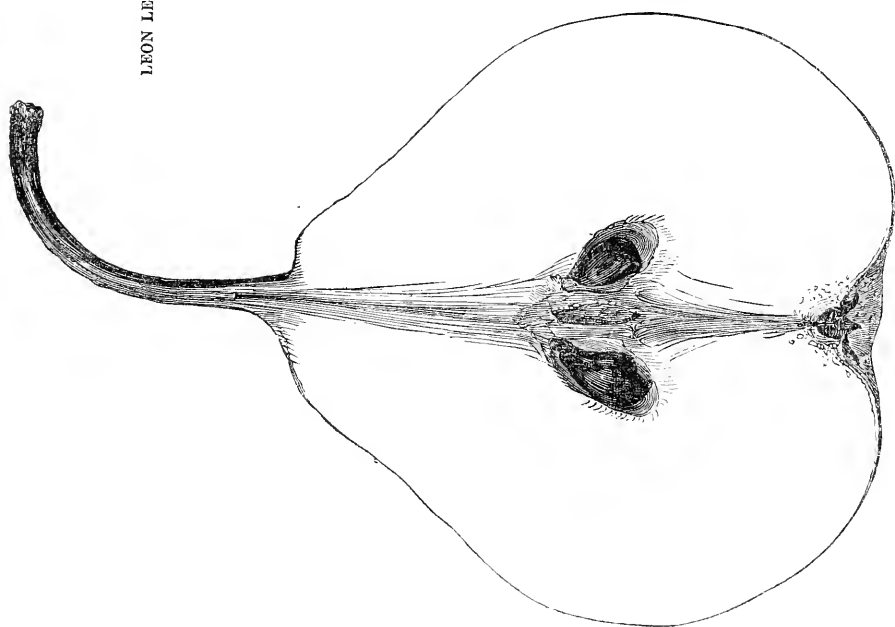
BY THE EDITOR.

THERE has been of late considerable inquiry in regard to winter pears. The sup-

posed as well as real difficulties of keeping them during the winter has had the effect



LEON LE CLERC (DE LAVAL.)



of turning attention from them, and they have consequently been grown by comparatively few, and a still smaller number have successfully ripened them. This is not intended for an article on the keeping of pears, but it will not be out of place to repeat a statement we made a number of years ago, that winter pears may be kept in a good cellar, with almost as little trouble as apples. Some of the pears sent us by Ellwanger & Barry are still sound on the 13th of June, and this without any extraordinary means having been taken to preserve them. We have taken advantage of the fine specimens sent us by Ellwanger & Barry to make portraits of many of them, which we shall from time to time lay before our readers, with the hope of making winter pears better known than they have heretofore been. It must be understood, however, that late winter pears, such as we have at present, are most of them de-

ficient in that melting lusciousness which gives such a zest to our best summer and autumn pears. While some are good eating pears, others are only good cooking pears; but even a good cooking-pear is somewhat of a luxury in the month of March.

The example now presented is *Leon le Clerc* (de Laval,) which must not be confounded with Van Mons' *Leon le Clerc*, which is quite a different pear. We give a section as well as perspective view.

*Size*, large. *Form*, obovate, inclining to obtuse pyriform. *Skin*, dull yellow, with russety spots. *Stalk*, nearly two inches long, stout, curved, and swollen at the point of insertion. *Calyx*, large, with long, narrow segments, in a small basin. *Seeds*, very large. *Flesh*, white, somewhat crisp, juicy, and a little astringent. *Quality*, good for the kitchen. In use till May, when well kept.

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## PLANT HOUSES.—II. THE COLD GRAPERY.

BY THE EDITOR.

IN a former article we promised to pursue the subject of glass houses for plants; and we now purpose taking it up, and continuing it with some degree of regularity. There has been no period in our history when so many glass houses were built as at present. It would be safe to say that the proportion is a hundredfold greater now than ever before. This is not owing to a general increase of wealth, but to a really substantial growth of taste for rural life and its solid comforts. The taste for rural improvements and rural enjoyment has increased wonderfully within the past few years, and that good old Saxon word *comfort* is getting to have a meaning among us. This growth of taste is not confined to the wealthy, but pervades all classes of society, and is one of the happiest signs of the times. One of its most pleasing manifestations is the desire for plant houses now so prevalent. Those who can not afford one

in the garden will have one in the parlor in the form of a Wardian Case. We hope to be able to say and do something to direct and gratify this taste.

We shall first give our attention to the *construction* of plant houses, which we have made a study for many years, and, as we think, introduced some substantial improvements. The old-fashioned and still common *sash* roof is so entirely without merit that it may be passed by in silence. The fixed, continuous roof is the only one that should be used on any permanent house with pretensions above a shed, except, it may be, a house erected on leased ground, and intended to be taken down and removed; and we should make use of a fixed roof even in such a case as that. The fixed roof is the cheapest and most durable, and incomparably the most beautiful. The particular merits of the style that we have adopted will be seen hereafter.

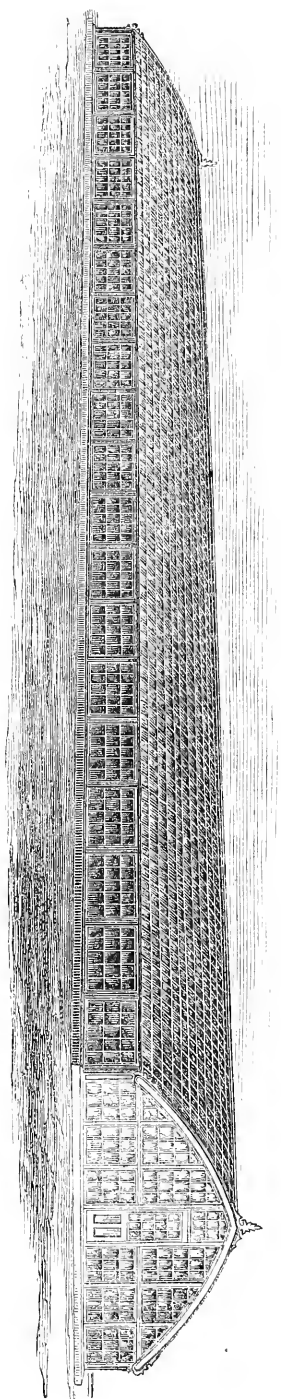


FIG. 1.—Perspective.

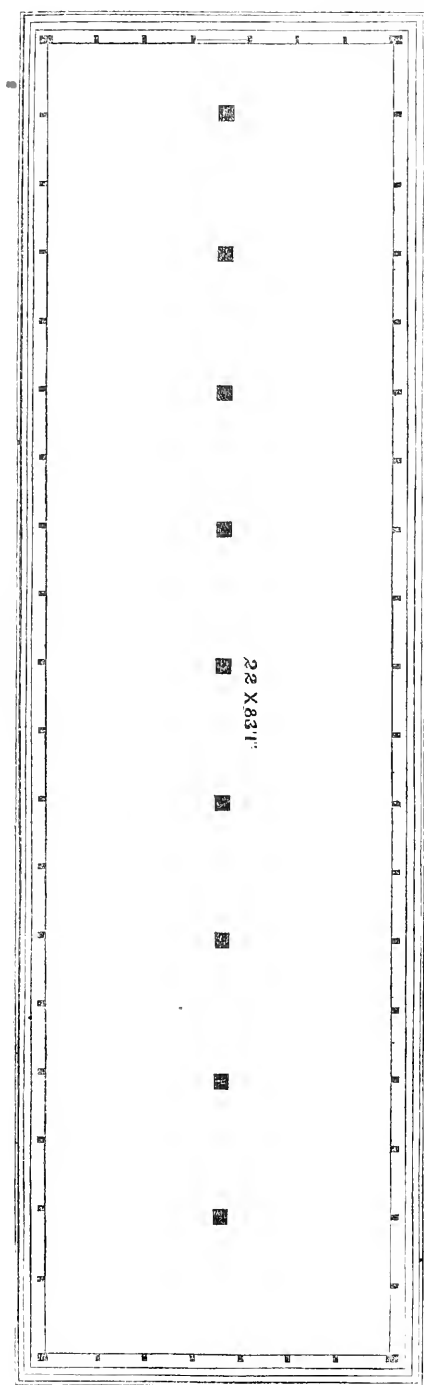


FIG. 2.—Plan.

The illustration here given is that of a cold grapery which we erected in the winter of 1861-2. It is now in successful operation. It is located on the banks of the Hudson, near Sing Sing, and occupies an elevated site. *Fig. 1* is a perspective view. *Fig. 2* is the ground plan. The house is 83 feet long and 22 feet wide. The foundation is a hollow brick wall three feet deep, about one foot being above the surface. The side sashes are three feet and three inches high. The roof is a continuous fixed roof, with ventilators along the ridge. The sash over the door at each end is hung at the bottom as a ventilator, and, except in very hot weather, will give all the ventilation needed in connection with the side ventilators. When these are not used, the top ventilators can be brought into play, or both can be used at the same time, according to the fancy of the gardener who may have charge of the house. All the wood work about the house is light, strength being attained by the peculiar manner in which it is put together. The rafters are only 2 by 6 inches. The purlins are 1 by 3 inches; there are two on each side of the house. The studs or uprights are 2 by 4 inches. The roof is curvilinear, and by no means sharp, the angle being 34 degrees. The whole in-

terior of the house is filled in to the depth of three feet with a good compost, in which muck figures largely. The walls being three feet deep, and laid on flat blue stone, there is but little chance of the roots of the vines getting to the outside; and it was not intended that they should.

It will be seen that the timbers in this house are all very light, yet the house is very much stronger than the average of graperies, and will last in good condition ten times as long as the old-fashioned sash house. The house is quite plain, having nothing in the way of ornament except a plain scroll over the ridge and a finial at the peak; yet the outline and proportion are such that the architectural effect is pleasing to a high degree. The reader can form some opinion of this from the perspective view. It is a house that will arrest the attention of the passer-by, and afford its owner a large degree of gratification. It belongs to Henry Young, Esq., who has one of the most commanding sites on the Hudson River.

In subsequent articles we shall give other examples of this style of building, this being only one of many either completed or in process of completion.

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#### THE LIBRARY. — IV.

BY S. L. B., BROOKDALE FARM, MAINE.

It rains to day; but rain never fell "upon the just and unjust" when it was more welcome than now. With the exception of a slight shower, we have had no rain for nearly three weeks, and now all are ready to enjoy the blessing. It gives a day of leisure to the tired workmen, and I love to see them enjoy it; nor do I quarrel with them because they do not find pleasure and recreation in those pursuits that afford pleasure to me. Job Jenkins may ride to town, and pass the day in lounging alternately at the tavern, the store, the post-office, and blacksmith's shop, at each place entertaining a new company

with his stereotyped phrases and ready-made stories. I am perfectly willing, but it is a sort of enjoyment that I never had the capacity to appreciate. Ralph Angler may take his fishing rod and appurtenances, (it is not a hard rain, nor cold; but a gentle summer rain,) and wander along the forest brook, now through mud and mire, to a concealed sunken log, a real nook for trout; now across the wet grass in the meadow to intercept a sudden turn in the brook; waiting here and there to coax a nibble from the coy denizens of the pretty stream, with indifferent success, and reaching home at last with a fisherman's

luck. There is, to be sure, a bewitching pleasure in this—I confess I have a weakness for it myself; but as for angling in a rain storm, Ralph may catch the trout, and if he pleases invite me over to dinner. As for me, I spend the day most delightfully in my own little library among my few chosen volumes. Books are always inviting, and the library always cheerful, but never more so than on a rainy day in summer, or amid a snow storm in winter. When one can sit by an open window, and see the flowers grow and the grass wave, he can not bear to read of flowers, and grass, and trees; he must go out to see them, and with his own hand water the flower, and admire the perfection of its beauty. But when the rain beats against the window that enjoyment which nearest approaches it, is in remaining within and reading of their charms. So I remain in to-day. I look out at the window and across the meadow to the wood and hills beyond, and am thankful for a quiet home in the country, homely as it is in its situation and surroundings. I am thankful for friends and the prattle of youthful lips, and for those books that are “the joy of youth, which delight age, decorate prosperity, shelter and solace us in adversity, pass the night with us, go into the country with us.” I may be alone, yet I have friends on every hand; Job may tell stories to his village neighbors, and Ralph enjoy the company of his fishing rod and dog; but see what enjoyment is mine? What a troop of friends come at my bidding, and minister to my happiness! Harris opens to me the wonders of the insect world; Downing talks with me of country houses, their architecture and beauty; Mr. Mead comes all the way from New York to give me a series of lectures on grape culture; with Arthur Young I visit the vineyards of France—what a delightful guide he is; Coleman tells me all about the agriculture and domestic economy of Great Britain; Mechi instructs me in “How to Farm Profitably,” leaving for the time his Tip-tree Hall estate, and condescending to be my guest; Emerson brings into my room the trees of the forest, and dwells with peculiar delight upon their uses and beauty; while

Langstroth instructs me in bee keeping, French in Drainage, and with a company of savans I explore the natural history of our country from the Mississippi to the Pacific. Am I in a mood for poetry? Milton, Shakespeare, and Byron come at my bidding; for history, Bancroft, Prescott, Motley; for biography, Irving pictures the career of Washington, and other fruitful authors tell me of Webster, Clay, Greene, Randolph, and the fathers of our republic! Who could ask for more illustrious friends, or for better company on a rainy day?

I had been telling you something about the classification of books, and began this morning with the intention of giving you some miscellaneous hints in regard to their uses and the care which they should receive, designing to finish my talk with this number; but, unfortunately, I have sadly digressed; so I must claim your indulgence, hoping that Mr. Mead will allow me a little space in a future number, if I promise it shall be the last.

Of course it is not for me to say what kind of books you must have; every one chooses to make a selection for himself. I have tastes peculiar to myself, and can purchase such books as suit me; another would not thank me to make a selection for him. There are, of course, standard works in the various departments of knowledge which every one will need, and when these are obtained the details can be filled up to suit the owner. Hundreds of volumes could be heaped together, and if it wanted the twenty or thirty standard works—the corner-stones of human knowledge—it would be injustice to call it a library. Obtain these, and fill up the deficiencies at your leisure.

Your books are arranged upon their shelves. I can not say with another author, that “books should be covered as soon as bought,” for I think it altogether unnecessary in a private collection, as they certainly look much better without; but they should be numbered, and whatever system of arrangement you adopt, each volume should have its place, and be returned to it when it is not in use. I fancy a book-plate, with the name of the owner and a

motto, with a blank for the number of the book, and if you like, the year it was added to your collection. You remember Washington's motto—EXITUS ACTA PROBAT—"the end justifies the deed;" and D'Israeli, in his "Curiosities of Literature," gives the following as a free translation of the book-plate of an old Venetian and a lover of books. Nothing can be more beautiful:

"Golden volumes, richest treasures!  
Objects of delicious pleasures!  
You, my eyes rejoicing please!  
You, my hands in rapture seize!  
Generous wits and musing sages,  
Lights who beamed through many ages,  
Left to their conscience leave their story,  
And dared to trust you with their glory;  
And now their hope of fame achieved,  
Dear volumes! you have not deceived!"

I love to think of that old English Bishop, Richard de Bury, who, in the age of Edward III.—as early as the year 1341, and amid the first great struggle of the English mind for intellectual and spiritual freedom—formed the first private library in England, by purchasing thirty or forty volumes of the Abbott of St. Albans, paying therefor fifty pounds

weight of silver. This, says the entertaining author of "Curiosities of Literature," was an honorable tribute paid to literature in an age not literary. He was so enamored of his *large collection*, that he wrote a treatise to show his love of books, calling it "PHILOBLIBLON," the elegant edition of which, issued by Mr. Munsell, of Albany, is among my choicest volumes. His example is most commendable. How many country residents there are who have libraries many times larger than that of the good bishop, and yet do not think of them with one half his love. My friends, give your books the best room in your houses, and a choice place in your hearts; then, after you have been gathered to your fathers, they will remain a perpetual monument of your enjoyments, tastes, and habits of life.

[We too are thankful for the rain, not only because nature was famishing for it, but because it has made you chatty, and secured us another addition to the Library. You seem so happy there, that we refrain from disturbing you, however, and will some time try to tempt you out with Ralph for a throw at the trout.—Ed.]

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## REMARKS ON NEW AND RARE FERNS.

BY DANIEL BARKER.

*Polypodium attenuata*.—Fronds simple, linear, coriaceous, of a dark green color, from 10 to 14 inches long. Rhizome creeping, and rather fleshy. Sori large, of a dark brown color. A very beautiful fern from Australia. A temperature rather above that of the greenhouse when the fronds are young will be of much benefit to it.

Soil, very rough peat, leaf mould, broken pots, and charcoal about the size of walnuts, with a good free drainage. Care must be taken that this fern *never suffers from want of water*. This is one of the most interesting and beautiful ferns for Wardian cases.

*Hymenolepis spicata*.—Fronds linear, lanceolate, coriaceous, and glaucous, from six to ten inches long, of a fine dark green color. From the Malay Archipelago.

It requires to be grown in a moist, warm atmosphere, varying from 60° to 75°. Soil, a rough mixture of peat, leaf mould, charcoal, and broken pots, with plenty of drainage. A very beautiful and rare fern.

*Campyloneuron rigidum*.—Fronds simple or pinnate, coriaceous, smooth, from ten to twenty inches long. Rhizome creeping, from which the fronds arise immediately after each other. A very handsome fern from central America, requiring the temperature of the hot-house.

*Lepicystis sepultum*.—Fronds lanceolate, pinnatifid, from six to ten inches long. It requires a very rough soil to grow in, composed of large pieces of peat, broken pots, and charcoal, with plenty of drainage, with frequent syringing. A native of tropical



America. The scales covering the fronds of this genus are most beautiful objects for the microscope.

*Anapeltis venosa*.—A most beautiful fern from tropical America. Frond simple, from two to six inches long.

*Anapeltis vacciniifolia*.—A most elegant fern from Brazil. The veins are of a dark olive green, contrasting beautifully with the light green fronds.

*Phymatodes lanceolata*.—(Syn. *Polypodium lanceolatum*.) A most interesting fern from South Africa. It should be grown in a warm, damp atmosphere, and placed where it can ramble over old pieces of wood or rough pieces of soft rock, where it will form a very beautiful object.

*Pleopeltis percussa*.—Fronds from six to ten inches long. This elegant fern is from tropical America, and is one of the most graceful and lovely in cultivation.

*Nerrodium lanceolatum*.—Fronds simple,

lanceolate, from six to twenty inches long, of a beautiful bright green color. A noble fern, a native of the West Indies. It requires a mixture of peat, leaf mould, and small pieces of charcoal, with plenty of drainage. Rare.

*Phlebodium dictyocallis*.—Fronds pinnate, from one to three feet long. It requires a warm, damp atmosphere. Soil, rough peat, rotten wood, charcoal, and plenty of large broken crocks.

*Phymatodes succata*.—Fronds pinnatifid and pendulous, with long stripes from two to four feet long. A native of Java; and one of the most noble of ferns. The graceful and pendulous fronds are most magnificent. Culture same as *Phlebodium*.

[We are obliged to Mr. Barker for these remarks on ferns. They are becoming every day more popular, not only in collections, but for Wardian cases, for which they are admirably adapted.—Ed.]

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## ACTION OF LIGHT ON ROOTS, ETC.

BY P. G. BERTOLET, OLEY, PENN.

DEAR ED. HORT.,—The May number of the *HORTICULTURIST* has come to hand, and in glancing over its contents I perceive that "Novice" has filed some exceptions to an article of ours in a former number.

Prof. Wood says, that roots terminate in what he calls *spongioles*. These are very small cul de sacs, similar to the lacteals of the *prima via* of the animal system. This is the medium through which passes nearly all nourishment of plants. The process by which this takes place is called *endosmosis*, because it passes directly through the tissue. This tissue has the assimilative power to select the particular elements, after being eliminated from the soil, as *Novice* says, required by each individual plant. These *spongioles* perform, indeed, a very important function, and, as stated in the March number, much of the improvement in the stock depends upon this. It is curious to observe that one set of these *spongioles*, side by

side, will assimilate the materials for a lordly oak, while the other does for a lofty pine.

It is with a view of rendering nourishment more available that we apply our various fertilizers, so that it be eliminated, and the more readily assimilated and absorbed. Silica is to some extent rendered soluble by alkalies, and thus rendered more available to plants. It is in part for this that alkalies are found so beneficial; the fruit becomes glossier and the field greener.

(We never meant to convey the idea that any elements were eliminated in the *spongioles* of roots by light, etc., certainly not; but if we had used the term assimilate, which we did in the hurry of the moment omit, we presume all would have been satisfactory. We owe an apology for this to your readers, and will endeavor to do better next time.)

Novice advocates orchard plowing. His

recommendation would have been more satisfactory if he had also described the character and nature of his soil. The indiscriminate plowing of orchards might prove as disastrous as did Dr. Briar's remedy to his blacksmith patient. It seems that he had two patients afflicted with fever and ague, the one a tailor, the other a blacksmith. Dr. B. recommended the tailor to eat *Sauer Kraut ad libitum*. He got well. Encouraged by this, he gave the same advice to the blacksmith. But he died. Note in Dr. B.'s memorandum book: "*Sauer Kraut* will cure the tailor of fever and ague, but kills the blacksmith." Plowing may answer in some localities, but will not do for this.

The surface of this section of country is beautifully undulating, and the soil is of a deep limestone clay, largely intermixed with calcareous, siliceous, and argillaceous material, thereby rendering it light and dry, and when once properly prepared for planting fruit trees, needs little subsequent plowing; in fact, plowing will do infinitely more hurt than good, according to our observation and experience.

In regard to the subject of light, we can only add, that solar light, as well as solar heat, exerts very important offices in the vegetable economy. Perhaps more so in the leafy portion than in the rootlets, yet none the less important. It matters not whether this light exerts its influence directly or indirectly; through the opaque coverings of the soil, or through the green leaves. Its effects are there, and must be, or Novice's potatoes would be *non est*, and nothing to say about afterwards. It is solar light that changes some of the assimilated material into chlorophyll, giving the beautiful verdure to vegetation, generally, as well as the variety of tints of the petals of the flowers; the colors of flowers are but modified chlorophyll.

Light affects the whole organization of the plant; the roots can not be excepted. The great life-givers are the imponderables, electricity, light, and heat.

In order that the spongioles of the roots

should be acted upon by the rays of the sun, it would appear that the superficial coverings of soil were no entire exclusion. On the contrary, light need not necessarily be as broad as daylight, to produce effect. Of course, it will be modified. Photographic plates, rendered impressible to light and placed in the darkest cellar, will yet receive the impressions of objects; hence there must be light, besides electricity, solar or terrestrial heat, capable of producing the effect. Nature uses subdued shades of light, as well as bright rays, for the accomplishment of her many works.

There are as many shades or varieties of intensity of light as there are degrees of temperature; and if so faint and subdued as even to be entirely obscure to our physical senses, it is no proof that it is not potent and sufficient for the purposes it was designed for by the Creator.

We have noticed some singular effects of light in the animal economy. A tadpole would always remain one, were it not for the effect of light upon his system. Yet I have seen this animal quarried out of a solid limestone rock, where it was imbedded in a cavity very little larger than its body—alive! and from appearance a good-looking frog, who had arrived at his seniority ages ago, with eyes, but defective locomotion. The head of this animal was at least six feet from the surface, in the solid rock, and no ingress whatever. The moisture which percolated through this dense mass was sufficient to support its life, and light and warmth enough reached it for its development. Similar instances are recorded where this occurred even in the red sandstone.

These may be regarded as tough stories by some, yet they are nevertheless true, and go to show that light will produce effect even beyond the mere superficial surface.

Even the moonbeams, weak as they may appear, exert some influence on the growth of plants, as shown in a very able article in the *HORTICULTURIST* some years ago.

We regret that we can not follow this

very interesting subject in all its ramifications any further for want of time at present.

[Novice has here an admirable opening

for an investigation. The subject is light, but there is danger of being lost in the dark. Will Novice respond? Mr. Bertolet has invested the subject with much interest. —ED.]

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## THE CONCORD GRAPE.

BY D.

WELL, Mr. Editor, what do you think of the Concord grape? During the last six months it has been spoken so highly of that I can not help, with your permission, saying a word about it too; but all that is said is always the same, that the Concord is a good grape. I would like to hear, however, for what it is good. Some advise to plant it rather than any other kind for vineyard culture. That, I think, is a big mistake, and, unhappily, a good many will follow it. I will try, then, as well as I can, to show whether the Concord is good for vineyard culture.

Let us see. The Concord, in its way, is a very big grower; (too big for me; I like fruit better than wood and leaves.) It is very healthy; (as healthy as any wild vine; it is pretty near wild itself); rather large fruit, large berries, with fine bloom, and gets ripe soon enough to have its fruit in season every year; but I would like to know what we can do with such big fruit. For myself, I do not want any, and a good many are like me. The skin is thin, with 3 or 4 drops of thoroughly sweet juice, with that strong, wild taste that you call here foxy; and very big, thick, acid pulp. If you do not spit it out quick from your mouth, it would be as good for you to eat as any kind of green one, and very likely would make you sick. If we could melt that pulp, and change it into Delaware juice, I would be the first to say huzza for the Concord. I could name more than fifty persons around here whom I have asked what they thought of the Concord grape, and they have all answered me, "It is said the Concord is a good grape, but do you like it?" No! but it sells well in the market. Mark that, Mr.

Editor; they say it is good because it sells well in the market; but they do not like it. Now, why does it sell well in the market? Because it is not known yet, and the people believe that the wind blowing so strong from the west is the right wind; but in a couple of years, when the best grapes of the world will be known, it will rot on the market.

Let us look at its productiveness compared with the Delaware. The Concord growing so much wood, prevents us from planting more than 888 in one acre in planting them at 7 feet by 7 feet apart. If it is planted thicker, in a very short time the roots become mixed together, (I think every body knows that if the top is growing big, the roots grow accordingly in a good many kinds of plants), and the vines would not last very long. Now, we will suppose that every Concord vine will bear 10 lbs.; that would make 8880 lbs. to the acre. We will suppose they are sold at 10 to 15 cents per pound; we will say 12 cents; that would give \$1065 60. For that you must sell all the crop. If you do not sell it all, what will you do with what you do not sell? I do not think you can make wine with it with profit; and what kind of wine would it be?

Now, we will see what we can do with the Delaware grape. The Delaware is a good grower, (not a big grower, like the Concord,) healthy. The fruit is not so big as the Concord, but every thing is good in it. The skin is rather thin; there is plenty of a fine, sweet flavored juice, with very little pulp. It ripens its fruit in the first part of September. Not being so big a grower, we can put in one acre, at 4 by 6

feet, or 5 by 5 feet, 1742 vines. I would prefer 4 by 6, for any kind of training except the bow system, where 5 by 5 would be better, or Thomery, where you have to plant them at 2½ feet. If the Concord will bear 10 pounds each vine, the Delaware, I am sure, will bear 7 pounds, which would make 12,194 pounds in one acre. At less than 15 cents per pound, for the present, it is more profitable to make wine with it. 12 pounds of fruit will give one gallon of juice, and it will be a long while yet before the Delaware wine will be sold at less than \$4 per gallon; but we will put it at the same price as good Concord, 12 cents per pound. That would make \$1,463 28; and if you do not sell it all, you can make good wine with it without sugar or any thing else. I think it is very easy to see whether the Concord is the best grape of the world, as I have seen it called in one number of a Concord newspaper, called, I think, *Rural American*, edited by T. B. Minor. I would plant the Concord where the Delaware would not grow at all.

Will you let me tell you, Mr. Editor, and I will have done, what I think makes so many people speak so favorably of the Concord. You know as well as I that a good many nurserymen try to grow grape vines

just as they grow currants; they cut a piece of wood, put it in the ground, and let it be. It must grow that way. Concord, Hartford Prolific, Isabella, Catawba, etc., grow very well that way, and they have a great many of them, and they do all that can be done to sell them. The Delaware does not grow that way; to make good plants with it it wants a green-house and good management. It is for that they do not like it; they can not grow it right; they have no time to do it; and they say the Delaware is good for nothing, because we can not make it grow like our currants. That should make somebody laugh.

[The above, from a Frenchman, with a nice taste for good grapes, criticizes the Concord very fairly. So far as *quality* is concerned, it must be admitted that the Concord has no claims to be considered a first-rate grape. It is its hardness, productiveness, and large size that make it popular. There is no delicacy about it. A time will come when the greater portion of grape consumers will have acquired a discriminating taste, and then *quality* will be paramount even in a market fruit. But at present it is not so. We have never seen a man who could eat the Concord *after* the Delaware without making a wry face.—Ed.]

## THE PEACH-TREE BORER.

BY ROYCE, NEWBURGH, N. Y.

HAVING successfully fought this depredator during twelve years past, I take pleasure in putting the facts before your readers. The time most desirable to operate on the borer being *early* spring, renders it now opportune to describe the mode, which is as follows, viz.:

With a garden trowel, old dull knife, or other convenient tool, dig a shallow circular trench, about three inches wide, and deep as the borer works, close around the naked crown of your tree. Fill this trench with small pieces of quick (fresh burned, unslacked) lime. Pour boiling hot water on the lime,

enough to slake it hastily, and immediately cover over the lime with earth about an inch deep, to retain the heat. Soon after, pour against the tree, at the crown, enough boiling water to make the lime into a plastic paste, and proceed to paste this hot lime around the crown as high up as the borer is wont to attack the tree, and your job is done for twelve months, if done very early in spring.

The heat of boiling water poured on the trunk of a good-sized tree, just at the surface of the cold earth, is insufficient to kill all the borers and nits, unless in great volume, or the tree be wrapped in some suitable heat-

retaining application, like a wool blanket, and water kept flowing some time. And though it should destroy all grubs and nits, it affords no security after the temperature has returned to the natural standard; but the caustic properties of lime repel the depositors of nits, as well as destroy all beneath it, and prevent the ravages of these pests from spring to spring, though not longer, as the rains and atmospheric influences gradually render lime inert. A pint of good lime and a quart of hot water are sufficient to preserve a tree for a year.

Where lime is not attainable, and good hard wood ashes are to be had, I presume they would be found efficient, if aided by some heat-retaining application, and water used more freely to keep up the heat until it has time to strike into the albumen. Quite adhesive earth or clay may make an adhesive paste with wood ashes, and the ashes would doubtless repel the borer family as long as retained in contact with the bark of the tree. A peck of unleached ashes would not be out of place, annually, around the crown of a peach tree of considerable size, as that tree consumes potash largely in its wood, fruit, and foliage, and so exhausts the alkalies in the thin, sandy soils, that but one orchard can flourish on the same soil, while the most extravagant growth of wood and yield of fruit

is seen to be perpetual on soil abounding in very alkaline earth. Growing in soil largely composed of fuller's earth, on the banks of York River, Va., at Bigler's Mills, I measured the trunk of a peach tree which measured thirty-eight feet in circumference at two feet above the earth, from which the yield good peaches is twenty-five to fifty bushels annually. The spray of this tree was forty-nine feet across, in the spring of 1860, and the branches were sound throughout. I am strongly impressed that a supply of potash equal to the demand of the peach tree would banish "yellows," and with the borer kept at bay, we would again find the peach tree as hardy, prolific, and thrifty as of yore.

[We thank you for this most interesting article on the borer. It came to our hands too late to be of much use for the destruction of the borer this spring. We hope it will be read and carefully stored up, for it seems to contain a valuable remedy for the destruction of this pest. It is a remedy readily procured and easily applied. We suggest that the trunk of the tree be plastered a couple of feet high; for we have known the borer to enter above a good remedy when applied only a few inches above the surface; but this only occasionally. Their favorite point of attack is at or near the surface, and when routed here, they generally beat a retreat.—Ed.]

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## MR. VAN VORST'S AZALEAS.

BY THE EDITOR.

It was our good fortune, during the latter part of May, to visit the plant houses of C. Van Vorst, Esq., of Jersey City. It was just at the happy moment when the Azaleas were in bloom, and the whole house was aglow with their brilliant flowers. It was a sight to waken the enthusiasm of the most indifferent. We have never elsewhere seen so many fine Azaleas under one roof, not even at our public exhibitions, where the stimulus of competition is supposed to bring out the best. This praise is intended to apply not only to the beauty and variety of

the kinds embraced in Mr. Van Vorst's collection, but also to the skillful manner in which his gardener, Mr. Fleming, has grown them. From habit, or natural taste, we are apt to divide our admiration pretty equally between the intrinsic beauty of a plant, and the skill with which it has been treated. A well-grown plant always gives rise to pleasurable emotions, whether it be in bloom or not.

It has been thought by some that the amount of pinching required to give Azaleas a low, round-headed form, would destroy the

bloom; but the immense mass of bloom on Mr. Van Vorst's plants quite disproves this. To insure the bloom, it is only requisite that the pinching be done at the right time. Mr. Fleming has mostly given the round-headed form to his plants. Some, however, have the pyramidal form, and a few are grown as standards, as it is technically called; but whatever the shape, the plants were all in the best possible health, which they seemed to enjoy like happy children; for a flower-smile peeped out at every leaf. We would suggest to Mr. Fleming that he grow some of his Azaleas in the form of a column, say a couple of feet in diameter. We have grown them so four and five high, and found them effective. One of the best for the pur-

pose that we have tried is old *Smithii*; but among the newer kinds will be found some equally good. The color should be dark, white being the least effective in this style.

While at Mr. Van Vorst's we made a descriptive list of a couple of dozen of the newest and best of his Azaleas, which we shall soon give the reader, in connection with an article on growing the Azalea. Mr. Van Vorst has other fine and rare plants besides his large collection of Azaleas, as well as the best collection of Orchids in the country, of which we shall say something hereafter. Our present purpose was only to notice his splendid show of Azaleas, a laughing, joyous group, that we shall never forget.

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## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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MR. CARPENTER'S GRAPES.—In the account of Mr. Carpenter's seedling grapes on p. 191, it does not appear to which of them his account relates. It is to the *Lydia*. It is an oversight of our own that the name was not given. It may be added here, that Mr. Carpenter named this grape *Lydia*, after Mr. Kelley's first wife.

MR. JUDD'S STRAWBERRY SHOW.—The exhibition of Strawberries took place at the office of the *Agriculturist*, on the 18th and 19th, (just as our last form is going to press.) It was feared that the severe drought would materially detract from the interest of the exhibition, but such was not the case, though it prevented some from exhibiting, and thus curtailed its "proportions," though not its "fairness." In one respect at least the show

was remarkable: it contained the largest berries we have ever seen. Mr. Boyden exhibited a seedling of mammoth proportions; it might appropriately be called the Jersey Mammoth. There was also a plant of it. From the plant and the fruit we make the following deductions: it quite equals the Wilson in productiveness; it is nearly three times the size; and is superior to it in quality. There were also several other seedlings, some of very good quality. The *Triomphe de Gand* was shown in larger quantities than any other variety; some samples were very beautiful. The quality was better than last year. Of Hovey, there was only one dish: and of McAvoy's Superior and of Longworth's Prolific there were two dishes. One dish marked McAvoy was the Extra Red. There were several dishes of the Austin, and one of

Russell's Prolific. The latter is of large size and good quality. There was also exhibited a new berry named the Union, large and handsome, and of fair quality. The Wilson was shown in quantity. The berries in one dish for competition were about two-thirds *Triomphe de Gand*. It was of course ruled out. Mr. Judd may very well call this the *big* Strawberry show. The arrangements were good, and the whole affair a very pleasant one. We shall hereafter make some comparisons suggested by this exhibition. At present we append a list of the awards:

Best 25 varieties, one quart each, \$7, to Wm. F. Heins, Morrisania, N. Y.

Second, \$5, A. S. Fuller, Brooklyn, N. Y.

Best dish of Market Berries, (2 quarts,) \$3, to L. M. Pease, N. Y., Farm School, Mount Vernon, for *Triomphe de Gand*.

Second, \$2, to S. R. Trembley, Bergen Point, N. J., for the Union.

Third, to L. M. Pease, for Wilson's Albany.

Three largest Berries, weight and size considered, \$2, to Seth Boyden, Newark, N. J.

Best New Seedling, not before exhibited, \$5, to Seth Boyden, Newark, N. J., for his unnamed, No. 10.

Second, \$2, to J. W. Faulkner, Stamford, Ct.

Best flavored Strawberry, (1 quart,) \$2, to A. S. Fuller, Brooklyn, unnamed Seedling, No. 8.

Best quart of White Strawberries, \$2, to John Drummond, gardener to Mrs. Strong, Newtown, L. I., for *Bicton Pine*.

Best pint of Empress Eugenie, \$1, to E. Marshall, Poughkeepsie, N. Y.

Best quart Fillmore, \$1, to B. Williams, Mount Clair, N. J.

Best quart of Cutter's Seedling, \$1, to E. Marshall, Poughkeepsie.

Best quart of *Triomphe de Gand*, \$1, to F. W. Devoe, Fordham, N. Y.

Best quart Wilson's Albany, \$1, to L. M. Pease, Mount Vernon, N. Y.

Best quart of Hooker's Seedling, \$1, to Francis Brill, Newark, N. J.

Best quart Hovey's Seedling, \$1, to E. Williams, Mount Clair, N. J.

Best quart of Jenny Lind, \$1, to John

Drummond, gardener to Mrs. Strong, Newtown, L. I.

Best quart *Vicomtesse Hericart de Thury*, \$1, to H. C. Fuller, Godwinville, N. J.

LEAF OF THE DELAWARE.—The leaf received from a "Subscriber" at St. Joseph, Mo., is not the Delaware. The Rebecca is right. The "smoked paper process" is a very nice one for taking impressions.

SAXTON'S HANDBOOK OF TOBACCO CULTURE.—This is a compilation gathered from a variety of reliable sources, and presents the facts in tobacco culture in a manner to be understood. It is illustrated with a number of engravings, which add much to its value. It may be had of C. M. Saxton, 25 Park Row, New York.

KENTUCKY HORTICULTURAL SOCIETY.—We are indebted to the Corresponding Secretary for the following list of officers of this society for 1863:

President—DR. WM. ALLEN. Vice Presidents—DR. JOS. A. MOORE, ED. D. HOBBS, ANDREW HOKE. Treasurer—BENJ. D. KENNEDY. Recording Secretary—ORMSBY HITE. Corresponding Secretary—THOMAS S. KENNEDY. Executive Committee—A. G. MUNN, Chairman; C. C. CARY, WILLIAM MIX, S. L. GARR, H. S. DUNCAN, HENRY NANZ, J. SACKSTEDER. Fruit Committee—ARTHUR PETER, Chairman; JACOB JOHNSON, JAMES STIVERS. Ex-Presidents—LAWRENCE YOUNG, THOMAS S. KENNEDY, A. G. MUNN, and ORMSBY HITE, *ex-officio*.

All communications for the Society should be addressed to the Corresponding Secretary, No. 413 Main street, Louisville. The Society holds weekly exhibitions of fruits and flowers, at Masonic Temple, every Saturday morning, at 10 o'clock.

HARTFORD COUNTY (CONN.) HORTICULTURAL SOCIETY.—We are indebted to President Dewey for the following list of officers of the Hartford County Horticultural Society:

At the annual meeting on the 4th inst., the following officers were elected: D. S. Dewey, Hartford, President; J. S. Butler,

Edward Bolles, R. D. Hubbard, of Hartford, and nineteen others, representing different sections of the county, Vice-Presidents; Charles T. Webster, Recording Secretary; T. K. Brace, Hartford, Corresponding Secretary; P. D. Stillman, Treasurer; and S. H. Clark, Auditor.

FRUIT IN CALIFORNIA.—We make the following interesting extract from a letter received from Mr. Eastman, of California. We hope he will continue to follow up our directions in grape culture, and send us the first *two-pound* bunch of the Delaware that he raises. We agree with the "boys," and consider pears cheap when they can be bought for the price of a "drink." The extract is as follows:

"Now I must tell you a little about the fruit. I believe you like to hear about it. Of grapes I can not say any thing this year, as we did not allow them to bear. We got them, three years ago, from the East; but they were almost dead and dried up when they got here, and it took us two years to get them to growing well, and the past summer we treated them after your directions for vines of one year, and the result is, some fine wood for the coming season. Of other fruits the past summer was one of great abundance; every thing that was large enough to hold up an apple, pear, or peach, was loaded to the ground. But the Bartlett Pear 'out did' even itself in early bearing and excellence. We had some twenty trees that beat any thing I have read of in the books. I must tell you about them. In the spring of 1860 we planted pear seed; they got large enough to bud in September; the next summer, 1861, they made a fine growth, from five to six feet, and as we wanted to have pears growing on a certain piece of ground, we took them from the nursery and planted them at one year from bud, and last summer they bore from one to four pears each, and they were *beauties*. I sold this year twenty-five dollars worth from one tree four years from the bud, on a hawthorn stock; I sold them, three for half a dollar. You will think that a big price; but the "boys" think, when

they can get three Bartlett pears for the same money that it costs for "two drinks of Lightnin' Whiskey," that they are cheap enough.

"Please keep the HORTICULTURIST coming; and, with my best wishes, I am yours truly,  
"H. B. EASTMAN."

TOBACCO CULTURE, ETC.—Under this title Mr. Judd, of the *American Agriculturist*, has published a pamphlet of 48 pages, containing three prize essays, and a number of others nearly as valuable. This pamphlet is the result of premiums offered by Mr. Judd for the best practical essays on the Culture of Tobacco. In publishing so many of those which competed, he has accomplished an important point, in the fact that the omissions of one essayist are supplied by another, and the reader is thus put in possession of some important details overlooked in the prize essays. The pamphlet is a very valuable one for all who are interested in tobacco culture. It comprises the experience of some well-known tobacco culturists, told in a simple, condensed, matter-of-fact way. There are a few, and only a few, slips of the pen. Mr. Schnieder, for instance, states that the "suckers" start first at the bottom and last at the top; but a mistake like this can do no harm, for the grower's first experience will correct it. At this time, when so many are turning their attention to the culture of tobacco, the appearance of this volume is opportune, and we commend it to attention.

#### BOOKS, ETC., RECEIVED.

*Tenth Report of the Ohio Pomological Society*, embracing the meetings held at Columbus, January, 1861, and meetings of the *ad interim* Committee at Kelley's Island, July, 1860, and Cleveland, June, 1862, with a Eulogy on A. H. Ernst, Esq., late President of the Society, and a Memoir of the late Nicholas Longworth, Esq., 1863.—Notice hereafter.

*Transactions of the Rhode Island Society for the Encouragement of Domestic Industry*, in the year 1862.

*Biographical Memoir of Wm. D. Brincklé*,



M.D., as read, on invitation, before the Pennsylvania Horticultural Society, March 24, 1863. By E. B. Gårdette, M.D. — A very appreciative memoir of a modest and most excellent man.

*Transactions of the Illinois State Horticultural Society for 1861 and 1862.*—Notice hereafter.

Tenth Annual Report of the Children's Aid Society. February, 1863.—The operations of this Society are carried on with vigor and success. It is admirably managed. In rescuing children, in many instances, from the most degrading forms of idleness and vice, reforming their habits, and providing

them with good homes, it is doing a work of humanity for which we can not be too grateful. The man of wealth and the philanthropist should remember the Children's Aid Society.

Grape Culture, Wines and Wine-making, with Notes upon Agriculture and Horticulture. By A. Haraszthy, Commissioner to report on the Improvement and Culture of the Vine in California. With numerous Illustrations. New York: Harper & Brothers, Franklin Square, 1862. 1 vol. 8vo. Price, \$5.00.—This is mainly a report made to the Legislature of California. We shall read it carefully, and notice it hereafter.

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## CORRESPONDENCE.

PETER B. MEAD, ESQ.—*Dear Sir,*—Having promised, some time since, to send you some "cocoa waste" when I received a fresh supply, I have now to ask you for the direction to affix to a hogshhead, which you will please accept, on condition that at the proper time you will give those of us interested, the results of the experiments you proposed to make with it.

I do not remember whether I explained to you how my attention was first arrested by it; if not, the narration may be interesting. It was while on a visit to Mr. Donald Beaton, of Surbiton, England, some two years since. This distinguished florist, one of the most eminent cross-breeders of England, and the most racy of horticultural writers, as his weekly contributions to the "*Journal of Horticulture*" of London give agreeable evidence, was showing me his numerous family of seedling geraniums, from among which he yearly enriches the collections of bedding varieties with novelties in color or habit, when I asked him what gave his proving beds such a peculiar color, he informed me that it was the mulch he used, which was the refuse of cocoa-nut fibre, obtained from a mat factory in the neighborhood, and that for cuttings, etc., it was the best material for striking that he had ever used.

Subsequently, in going through the "experimental garden" with him, a superb private garden, whose then proprietor had called in Mr. Beaton's aid in embellishing the grounds, and where he had achieved some wonderful effects in bedding plants by sundry experiments with the various classes adapted to that purpose, my attention was attracted by the most thrifty and luxuriant growth of a "Cedar of Lebanon," an evergreen, as you are aware, of a naturally slow growth; but this specimen was so luxuriant, and exhibited such an unusual length of annual new wood, that I could not but inquire the why and wherefore. He stepped to the tree, and pushing aside the drooping branches, which covered the ground, requested me to look; then thrusting his hand in "cocoa waste," revealed a perfect mass of fine white rootlets, completely interlacing the whole substance, which was some four to six inches in depth. Here was a discovery. What a boon for us poor parched-up mortals on hungry, sandy soils, under our baking suns, to find such a mulching material, which contains also fertilizing, or at least invigorating qualities. I have made sundry experiments with it, but I find I am running into too long a note to undertake to give you the results now, unless I have sufficiently awakened your curiosity

in it to induce you to ask for them. Yours  
very truly,

B. C. TOWNSEND.

*Bay Ridge, L. I., June 15th, 1863.*

[Be pleased to accept our sincere thanks for the "cocoa waste." We are more delighted than we can express to you. We shall begin the experiments at once, and you and all our readers shall know the results. In the handsome present you have sent us we can see much good to the cause of horticulture, and we shall be much mistaken if the results do not place the whole community under obligations to you. The experiments that you yourself have made are exceedingly interesting, and we feel constrained to beg you to send them to us for publication. The native vines that you struck, at our suggestion, are in point. The difference between those struck in the "waste" and those in sand is apparent as far as the plants can be seen. Those same vines, now in our possession, will form our first subjects. But we shall have to go all over the subject at another time. It may be interesting to our readers to know that Mr. Townsend is one of the most liberal and accomplished amateurs in the country, occupying an enviable position.—Ed.]

ED. HORTICULTURIST—*Dear Sir:*—I notice in the HORTICULTURIST for June, that you have conferred upon me the rank of Major-General of Horticulturists, at the same time expressing the wish that you could add to it a commission as Major-General of Volunteers. Did I feel myself worthy to accept either of the promotions proposed, I would prefer the former to the latter, for I consider the position among horticulturists indicated by the rank of Major-General, as requiring a higher range of faculties, and a more ample culture, than any mere military position. The one indicates a genius for destruction, the other a genius for production. And it is far easier to destroy than to create. The man who informs a people how to make two blades of grass to grow where but one grew before, is a greater benefactor to his country than he who taketh a city. I am not worthy of

the title proposed, for I am a mere volunteer in horticulture, the same as in war. I think also that you are making a bad precedent, for if you commission every one who has the same high appreciation of the HORTICULTURIST as myself, you will soon have an army of officers and no private soldiers. Still, as an amateur, I love horticulture. I love it not only because it gives me physical pleasure, but because it also brings me in contact with nature, and teaches me a thousand lessons of life which I can not learn equally well elsewhere. Horticulture discloses to us many of the Creator's *laws*, and shows us how God *works* in the world, and teaches us to work as He works. Oh, that rulers and statesmen would treat man as God treats him, for God treats him as a horticulturist treats a plant or a tree. When a gardener gets a tree, he plants it in the ground, and puts a fence around it to keep away the browsing cattle, and then lets it grow and develop itself according to the laws of its being. Occasionally he comes along and loosens the soil about its roots, and prunes out a rotten branch, or pinches in an exuberant shoot, and then lets it grow again in the sunlight and the air which God has given. In no instance does he attempt to make a peach tree bear apples, or a pear tree grapes. So God treats man. He plants him here in the world, and fences him around with law and penalty in order to preserve him from his own passions and external temptations, and then lets him grow and develop himself according to the laws of his being. Occasionally He comes along with the spade of special providences, and digs up the ground around him to let in the sunlight and air of truth, or sends the winds of adversity to rock him to and fro, and strengthen his fibre, but upon the whole He lets him grow and develop himself according to the laws of his being. So a true statesman treats a nation. He fences it around with law to protect it from foreign nations and domestic enemies, at the same time permitting each individual citizen perfect liberty to do as he pleases, so long as he does not encroach upon the

rights of any other citizen, and then lets the nation grow and develop itself according to the laws of its being. He does not attempt to make an agricultural nation out of one which is naturally only manufacturing or commercial, or *vice versa*; on the contrary, he leaves commerce, and agriculture, and manufactures, and railroads, and canals, to grow as the natural fruits and outgrowth of the nation, in accordance with the laws of its situation and being. The horticulturist does not attempt to *create* a plant; his art consists in removing the bondages which confine God's work, so that the plant may develop itself to the highest capacities of its nature. Such also, and no more, should be the end and aim of the statesman, the teacher, and the parent.

But enough of this. Thanking you for your kind notice, and also for that of your correspondent, I am, very truly, your unworthy centurian, R. BRINKERHOFF.

Augusta, Maine, June 8th, 1863.

[The little incident related by our Augusta correspondent in the June number, touched us very sensitively, and instinctively we felt that you were a man whom we should delight to honor. The beautiful and sensible response now made convinces us that we ranked you none too highly. We hope it may be our good fortune to make your personal acquaintance, for we feel that the bonds of a common love of horticulture have drawn us together.—ED.]

EDS. HORTICULTURIST,—I take the liberty to send you for inspection a few leaves from my Verbenas. Will you be so kind as to inform me what ails them, and the remedy for it? Some varieties are very much injured by the disease, while others appear to be free from it. I have tried a great many experiments on them, but have failed to do them much good.

I am a new beginner in floriculture; I built myself a small greenhouse two years since, and have managed it unaided, (except by the HORTICULTURIST and *American Agriculturist*,) with good success, and a great

amount of satisfaction; and, by the way, I soon learned a trick in striking cuttings, which I believe would be valuable to many of your readers. For experiment, in 1861, I took an eight-inch flower-pot, and filled it two thirds full of good loam; then placed on top of this in the center a three-inch pot, first closing the hole in the bottom with putty. Around this pot filled one and a half inches plain bar sand. In this I inserted cuttings of Rose (the green wood) and other tender plants, the lower ends resting near the surface of the loam; filled the center pot with water, and placed the whole on a bench over the flue of the greenhouse. The after care consisted in keeping the small pot full of water, and an occasional slight sprinkling over the whole. Every plant took root, and in a few weeks were in a good condition for potting off. I now strike nearly all cuttings in that manner, even Grapes, from single eyes and green wood.

They are surer to strike, and require less care than any other method I know of. It is just the thing for Roses, Pinks, Carnations, and Fuschias. If you consider this of sufficient importance, please to give your readers the benefit of it.

Truly yours, JOHN S. HARRIS.

La Crescent, Minn., March 12th, 1863.

[The disease affecting your Verbenas is the rust, which you will find treated of a few numbers back.—Your mode of striking cuttings is a very good one. It was figured in the HORTICULTURIST several years ago; but we can not, at the moment, find the cut, or we would repeat it. We used this method of striking cuttings fully fifteen years ago, with the most satisfactory results. It was used somewhat extensively at Iona many years since for striking grape cuttings, and with much success. We will look up the cut for you, and print it again. Many of our new subscribers will be interested in it.—ED.]

MR. EDITOR:—Is there a *good* raspberry, whose canes are hardy enough to succeed well without winter protection? I have tried

the Antwerp, Franconia, Fastloff, Brincklé's Orange, Col. Wilder, and of the ever bearing, the Belle de Fontenay and Merveille de Quatre Soisons. I am quite fond of raspberries, and am willing to give them good cultivation, including thinning, pruning, etc., except covering in winter: that I object to—1st, because it involves some trouble; 2d, because I can not do it without inflicting some injury upon the roots or canes.

Of all these varieties, Fastloff and Franconia are the *least tender*, as far as my experience goes. Of these, Fastloff is the more hardy with me, while a neighbor finds Franconia more so. I prefer the fruit of the Fastloff; so I have rejected every thing else except a row of Orange, which are to be tried one year more. Fastloff is, after all, only *half hardy*; but under the protection of a tight board fence, with a southeast exposure, it does pretty well. Can I do better? Is "Hornet" hardy? Are any varieties of the American Red (*Rubus stringosus*) really worthy of cultivation? Are any of the Improved (?) Black Caps (*Rubus occidentalis*) really worthy of the praise they have received? Can you give an answer to these questions among your "Correspondence," and confer a favor on me, and no doubt on other lovers of fruits, who, like me, have been misled by the opinions of interested parties?

I like your model reports of grapes. I have some twenty odd varieties of grape vines, and will send you a report next fall. The lake-shore of Ohio is well adapted to grapes, and I have never seen a model report from it.

There is a great amount of rubbish connected with the "grape question," which needs to be cleared away.

*Painesville, Lake Co., Ohio.*

[None of the raspberries you grow are hardy, and covering is indispensable to secure a crop. Of those you have, Brincklé's Orange is the best. The Purple Cane is hardy, and a good raspberry. The Improved Black Caps are also very good, and worthy of a place in the garden. We advise you to try the Purple Cane and Improved Black Cap; but be sure you get them true. The Hornet

is not hardy. The Clark Raspberry has proved to be quite hardy with us, and is a very fine fruit; one of the best. We shall be glad to receive your model report.—ED.]

INFORMATION WANTED ON WINE MAKING.—*P. B. Mead, Esq.*—From the fact that the Grape is now so generally planted, the prospect is that wine-making will soon become of extended and largely increased importance in our country.

It is objected to by some to add sugar to the must. I think the question of "why and wherefore" that a fermented liquor from the juice of the Grape, with the addition of sugar, should be condemned as "no wine," or, as some term it, "cordial," "stuff not fit to drink," etc., etc., should be fully expounded and understood.

We all know, I presume, that to make wine that will keep and improve by age, it is absolutely necessary that the juice or *must* of grapes contain a certain per centage of saccharine, to be transformed during fermentation into alcohol, whereby the fermented juice acquires sufficient strength or body to keep in a vinous condition for a series of years, and subject to variable temperatures.

As most, if not all our native grapes, in nine years out of ten, are deficient in this grape sugar or *glucose*, simply from the fact of not coming to that perfection necessary to a full development of this saccharine principle, the consequence is, that the *must*, when fermented, has not sufficient body to become a sound wine. It will either run into the acetous state, or remain a weak and rapid sour wine, liable, on a change of temperature, to again ferment and become stale and worthless.

The "why and wherefore" that cane sugar is unsuitable to be added to the *must* previous to fermentation, so as to bring the juice up to the proper standard, to insure a certainty of good results in all seasons, is the question that I should much wish to have "ventilated," by yourself, Mr. Editor, or by some of your scientific correspondents, through the pages of the HORTICULTURIST.

I believe it is the custom with European

wine manufacturers, in unfavorable seasons, to add to their *must* a concentrated sirup of grapes, glucose, or grape sugar, to give strength and body to their wines.

Apparently there is no difference, so far as the saccharine principle is desirable, between cane sugar or grape sugar; then why not add cane sugar to the *must* to bring it up to the proper standard? about 16° of Baumé, or a more simple test is, so that a new laid egg will rise in the *must*, to expose about the size of a shilling above the surface.

It appears to be a mere matter of economy that they use the sirup of grapes in Europe, instead of cane sugar, if I am rightly informed.

As you, Mr. Editor, have now given us a series of articles on the raising, cultivating, training, and pruning the vine, I trust you will follow up the good work by giving us all the minutiae how to produce a good wine; and if you object to the addition of sugar to the *must*, then please do tell us "the reason why?"

Very respectfully,

J. B. GARBER.

Columbia, Pa., April 15, 1863.

[We know that there are scores of others who, like Mr. Garber, want to know why cane sugar should not be added to the *must* of the grape. We do purpose following up our grape articles with directions for making wine, and dislike to say much on the subject till we reach it in its proper place. Be pleased to have just a little more patience, and you shall be fully gratified, so far as we can do it. Wine *per se* is the *pure* juice of the grape; the addition of foreign substances makes it something else. The chief objection to the use of cane sugar is, that it produces injurious intoxicating qualities that wine should be free from. It opens the door, too, for all manner of adulterations. It is a mistake to suppose that European wine-makers add sugar to the *must*, except in wines made for particular markets, which demand something strong and intoxicating. They never drink such wines themselves. We must have grapes that will make good wine, and they

must be grown where they will ripen; otherwise we shall, with our Yankee ingenuity get to make something out of corn and potatoes, and call it wine. At present something is done in that way, but it is called whiskey. Cane sugar is not necessary to make *wine* keep. Good wines ripen in one, two, or five years, as the case may be, and then keep ten, twenty, or more years, according to circumstances, when they begin to lose their bouquet, and become flat. But we will only say further at present, that you should take it for granted that it is a mistake to suppose that wine can be made from *cane* sugar, which is quite a different thing from *grape* sugar. We are quite willing that our correspondents should discuss this subject fully till we reach it in regular course.—Ed.]

MR. EDITOR:—Two years ago, when I subscribed for your magazine, my neighbor, who asked me to take it, said, among other inducements, that I would probably save the cost of it every month, and that any time, when I was puzzled or in doubt on horticultural matters, I would have a right and privilege to call on you for advice. Now I frankly acknowledge that I have had full value already for my money, but I have decided to make "the grand hailing sign of distress" to you, in the hope that you will relieve a doubting brother.

Three years ago I made a cask of grape wine, without sugar, and placed it in my cellar, and since the Christmas holidays our visits to it have been "neither few nor far between." The knowing ones told me that it would not keep, and I begin to believe it. As I am desirous to keep it in wood as long as I can, I wish you would inform me if it will be safe to continue drawing from it. Will not exposure to the air cause it to turn? Would it do to cover the surface with sweet oil? I have never tried that, but perhaps others have. Would you advise me to try it? or do you know any other plan equally as good or better? Again. Last season we had such a quantity of currants, which we could not sell for more than the cost of picking, that I made mine into vinegar; but I am too fast;

it is not vinegar yet, and I am doubtful as to the time when it will be. I have two barrels of pure currant juice, very sour, but flat and insipid, acting as if it was spoiling. Is there any way that I can save it, and make good vinegar of it? If you can help me out of this dilemma, I shall be glad to "divide it with you," for I confess that I am at a loss what to do with it, and feel that it will be a total loss without your assistance. Perhaps some of your city vinegar makers would buy it. Do let me hear from you soon. One more question. How shall I prevent my winter pears from drying up, while attempting to ripen them? When I find a mellow one, it is very good; but the largest number are shriveling, and can only be saved by stewing in molasses, and are good still.

[Your questions came pretty near fermenting before being answered; but we have so many that it is quite impossible to answer all at once. You endanger your wine in drawing from it frequently while it remains in wood, because of the exposure to air. If you can not bottle it, you must be careful how you draw from it. Wine in wood should be kept full. We have never tried sweet oil, and must confess that we have little faith in it. We fear you would only be substituting one evil for another; still, we should like to hear if any of our readers have ever used it. The simplest way to hasten acetous fermentation in your currant wine is to add to it the so-called vinegar plant, (mother of vinegar.) Another way is to add a little yeast and molasses: but the wine will turn sour fast enough by simply exposing the barrel to the warm sun with the bung loose. We have found no difficulty in keeping pears sound and plump in a dry, cool cellar. When you wish to ripen them, bring them to a moderately warm room *not* heated by a hot-air furnace. We usually place them in a closet where the air is still.—Ed.]

MR. EDITOR,—If not too much trouble, I would like a few answers to the following:

1st. Could I grow grape eyes in a hot water

case, the boxes of eyes covered with glass tightly, the hot water being led in pipe from the house to the shed?

2d. Could such shed, 10 by 15 feet, be heated to 60 deg., during winter, by pipes or gutters led around in the house, the hot water coming, as before, from the house, or, would it need a stove, and heat the water *in the shed*?

3d. Do propagators use bottom heat in summer for green shoots of grapes?

How long should the shoots be, and how nearly mature should they be?

4th. Will the common Morello Cherry grow readily from pieces of roots, say two inches long?

5th. Is it *necessary* for grape eyes, rose cuttings, etc., to be put in moss first to callous?

6th. Should be pleased to have some articles on the varieties of Lilies. The *last one* just gives us an appetite for more.

Bunker Hill, Ill.

W. L. G.

[1st. You can grow grape eyes very well in this way, but the glass must be shaded, or the exposure must be to the north.—2d. It would be very much better to heat the water in the shed, unless the house is very near by; otherwise you would hardly be able to keep up the necessary temperature.—3d. We know of but one or two who do, and that only for a few kinds that do not root readily. The shoots may be from two to four inches long, and taken while growing; they will consequently be green and succulent.—4th. Yes.—5th. It is not necessary, but may be done with advantage.—6th. You shall have more articles on the Lily. We are glad to hear that you are pleased with the one already given.—Ed.]

*The Kitchen Garden.*—Referring to article last month, (January,) the catalogue I figured on was *Thorburn's*, for 1862, and so stated in margin. I quoted "Bridgeman," *Young Gardener's Assistant*, as authority *for results*. Have not seen his worthy descendant's list lately, so do not know whether cap fits him or not.

"All the seed will not grow." Of course

not. He tells us how much will, or did in his day, if it does not now. Quality must have deteriorated. No one could wish for a less quantity than a five-cent paper, but such a modest amount does not figure in the list, except for herbs; neither does your pint of beans and corn.

*Suburban Gardens.*—The caution "not to plant unless willing to pay extra attention," you make apply to every thing, from Blackberry to Plum. It referred only to from Peach to Plum. According to text, *Raise only what it is impossible to buy in perfection.* I think every thing stands in proper order, Blackberry heading the list. Think a moment, Mr. Editor, before you depose it. You probably know what it is in perfection; few of the general public do. It is not a "market fruit," (except for cooking;) it is not a table fruit; and can only be eaten in its prime at the bush, when it will drop (not picked) into the hand. If pitched into a basket, and then turned out on a dish, it is ruined.

Think all fruit for the table should be placed there in the vessel into which it is gathered. There are tasty light baskets, that come quite cheap, which, trimmed with a few leaves, to my eyes look better than gilt china. Grapes will stand carriage better than any thing preceding them. Cherries spoil in a few hours. Pears can be bought in good order; should not think of growing them, if less than an acre of ground, and then only the early varieties.

I do not wish to appear to dictate what persons should raise. Those who have a fancy for any particular culture, will of course do right to indulge in it, even to the exclusion of every thing else. Such do not need my advice. All will not attach the same relative value to articles that I do. They will of course consult their own taste.

The remarks were intended for novices, in the hope they might enable them to start right, and work their gardens to better advantage than is usually done.

When in the callow state, five years ago, I started with a general assortment of nursery stock, from Apple to Walnut; and

vegetables, from Artichoke to Turnip, including Pumpkins and Cow Cabbage. Have got it pretty well whittled down now. The experience is not pleasant or profitable; and valuable time is wasted. Shall be glad if I prevent any from falling into the same error.

BROOKLYN.

[The catalogue quoted could make but little difference, since, in this particular, they will all be found to be nearly alike; that is to say, all that give tables of quantities. We should like Brooklyn to make out a definite list, say for a "small" family of ten persons, so that we may see what he will give them, and how much, taking Bridgeman's estimates for a guide, and making due allowance for casualties. The object of your fruit list was not so clear to us originally as it is now. Viewed in your light, the list is well enough. It must be admitted, for example, that Blackberries can not be bought in perfection in market; and what a difference between a *ripe* Blackberry and the thing you buy in market! And so of some other fruits. The novice, it is true, runs a little wild at first; but if he is an attentive reader he soon gets cured. Cow Cabbage, Pumpkins, and "such like," we should certainly keep out of a small garden; but a grape vine, Brooklyn—ah! that we should put in every garden, if it were not more than six feet square; for *ripe* grapes are almost as difficult to buy as ripe Blackberries.—ED.]

MR. EDITOR:—In the January number of the *HORTICULTURIST*, for 1862, an article was published, over the signature, J. S. Walter, stating that he was very much perplexed by the conflicting statements and opinions of nurserymen and dealers in regard to what kind of grape roots to buy, and asking your opinion or advice whether he had better buy pot plants with a mass of very small hair-like fibres, or plants with large roots of from one to three feet long, but said nothing about the fibres; and that it was claimed by the latter grower that the small fibres of the first vines would rot or disappear after being trans-

planted. And as it was stated in the remarks that these opinions of "Doctor" No. 2 were not correct, I thought I would give you the result in the growth of the two classes of vines; and, in order to do so, I send you some cuttings of the vines purchased of "Doctor" No. 2. You will see the size of the wood, and the canes were nine feet long; while those purchased of "Doctor" No. 1 were not more than two feet, and small at that. Recollect that these cuttings are Delaware, the plants one year old, from single eyes. If you can beat them in your part of the State, I should like to see them; for I never have seen the like of them in this part of the country before.

And now for the "very small fibres." I visited Mr. W.'s place in the fall, and he dug up one of those pot plants to examine the roots; and behold, the roots were bare, the small fibres had disappeared, and Mr. W. expressed himself satisfied.

Yours truly, J. CRAINE.

*Lockport, N. Y., March 11th, 1863.*

MR. EDITOR:—I take this opportunity of soliciting a little information or advice. I am situated on a bleak, high prairie, my western boundary being nearly on the summit of the highest hill around here. Right on this highest ground, with an eastern declination, I intend planting a pear orchard; but first I want to raise a good living fence on the western side, for a screen and protection from the keen, biting winds of winter. Supposing that young Osage plants are not now obtainable, I have procured some Honey Locust seed, and also some seed of the Buckthorn, which I have in small boxes mixed with sand and buried in the soil, for the easier germination in the spring. I have no experience with either of these plants. I wish to know which you think preferable. Will the Honey Locust bear the shears well? Besides these, I have the Gray Willow (yearling,) and Black Walnuts, three years old,

both fast growing with me. How will it do to set either of those trees in the fence rows some four or five feet apart, and then pile in with the Honey Locust or the Buckthorn, six or eight inches apart? Will the shade of the Willow or the Walnuts, which I would let grow up heavenward as fast as they will, be injurious? Inside of that row, which would be my fence and protection, I would plant my screen, say four or five feet from the outer row or fence. This I would have of evergreens. I can get good, well thickened up trees, of the American Arbor Vitæ, very cheap. Would it not be a good plant for the purpose? I have a lot of Red Cedar on my grounds; also a few Norway Spruce, Austrian Pines, White Pines, and several other sorts, but not enough of any one kind but the Red Cedar; and if I buy, I can get nothing so cheap as the American Arbor Vitæ. Which is the most vigorous growing, the Arbor Vitæ or the Red Cedar? The latter browns badly with me in winter, while the former is hurt but little. Now, Mr. Editor, I shall esteem it a favor if you give me some instruction as to how I can best, under these circumstances, procure the desired screenage and protection, what trees I had better use, what distance they should be set, etc. Is it best to set the orchard all of standards, or of standards and dwarfs mixed, and what distance do you think best? I find my trees and grape vine are injured a good deal from southerly and southwestern winds, in the growing season. Would not a screen on the south be good, too? Should I use evergreens there, or only deciduous trees? One question more, if I have not already given you too many. Which is the better early grape, the Hartford Prolific or the North America? If you will have the kindness to reply to these questions in an early number of your excellent paper, you will greatly oblige.

Yours respectfully,

WILLIAM FARE.

*Libertyville, Lake Co., Illinois.*



THE

# HORTICULTURIST.

VOL. XVIII.....AUGUST, 1863.....NO. CCVI.

## Hints on Grape Culture.—XXVIII.

As intimated in our last, we this month take up another mode of training the vine. It is not our purpose to exhaust the subject in these "Hints;" we intend, nevertheless, to give sufficient detail to make each mode of training tolerably clear to the beginner. Not a few valuable and interesting details are purposely kept in reserve, in order that these "Hints," when elaborated in book form, may have some original freshness, and be read again with interest and profit.

The mode of training now to be treated of we shall designate the "*short arm renewal system*." It is a good system, quite simple, can be made comparatively inexpensive, produces good crops, and may at any time be converted into the double arm system if desired. It is not, however, in its results, equal to the double arm system; that is to say, it will not, per acre, yield so large a crop of the best quality of fruit. But then, again, it does not require so large an outlay of labor and money, and for this reason we consider it the best of all systems for a man of moderate means.

We may pass by the preparation of the soil, planting, etc., the requirements of the present system on these points being the same as the double arm system, already

described. The rows should be six feet apart, and the vines four feet apart in the rows. The vines, during the first year, are to be grown to a single cane. The whole treatment, such as tying up, pinching in laterals, etc., will be the same as that described for yearling vines grown on the double arm system. At the end of the season the vines must be pruned down to the two low-

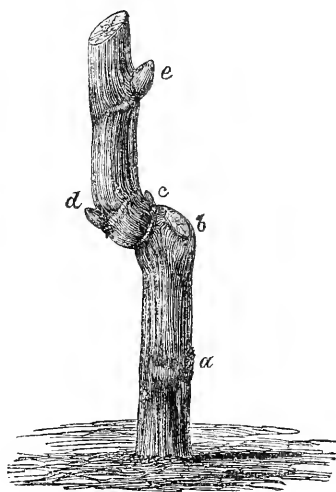


FIG. 1.

est eyes, as shown in *Fig. 1*. In exposed

places, heap a little earth around the short cane thus left. Uncover early in the spring, that the vines may have an early start. The buds *c*, *d*, and *e* will all start. If *c* and *d* should break strong, retain these, and rub out *e*. If *c* should be weak, rub it out and retain *d* and *e*. You can judge of their strength when the young shoots are about three inches long.

If any of the vines should have made a feeble growth during the first year, which is sometimes the case, these feeble ones must be grown another year to a single cane. The object must be to get a good foundation to build the superstructure upon.

The example given in *Fig. 1* is that of a vine in which the stump at *b* was not cut away as soon as it should have been, and the cicatrice is consequently large; but it will entirely heal over in the course of another year. It was designed to preserve the shoot proceeding from *a*, but it was broken off during the month of June, and the vine thus placed in the condition of a yearling. The cane itself had proceeded from an eye beneath the surface.

At the beginning of the second year is the best time to furnish the permanent support for the vines. A wire trellis *may* be used, but is not at all necessary, and weakens one of the points we have made in favor of this system; that is to say, the trellis in this system is an unnecessary expense. The needed support is afforded by two stakes to each vine. These should be placed about a foot from the body of the vine, one on each side. They should be put at least eighteen inches into the ground, and project about seven feet above. The holes for the stakes are best made by a crowbar. These stakes are to remain permanently, and are the only support the vines will need. They should be from three to four inches in diameter at the butt. They may be of Red Cedar, Yellow Locust, or Chestnut, whichever can be most readily procured. The Locust and Chestnut may be split into proper sizes. If Chestnut is used, it would be well to char

the ends. The charring should be smooth, and free from cracks. The complaint sometimes made, that charred posts do not last, is owing to the fact that the charring is cracked like a honey comb, presenting a thousand openings for the entrance of moisture, the bottoms of these cracks not being charred at all. If charring is not done, two or three coats of stone paint will answer the purpose very well. The posts should be set firmly in the ground.

To return to the vines. The best two shoots having been selected, they are to be tied to the stakes, and the tying repeated as often as may be necessary to keep the shoots in their places. The laterals must

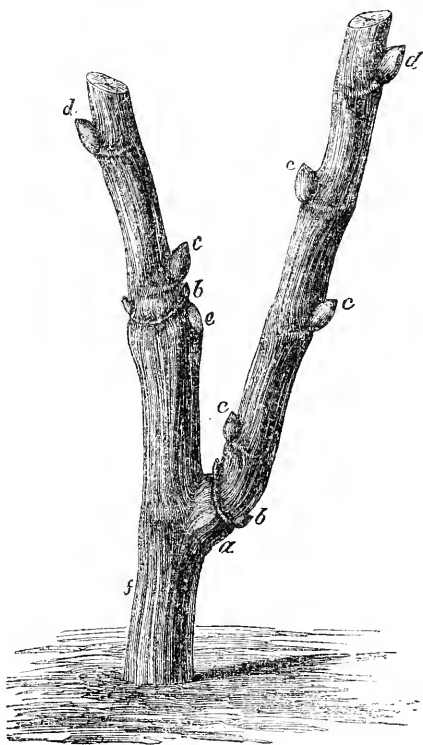


FIG. 2.

be pinched in, retaining an additional leaf at each pinching, as heretofore directed. The treatment, in short, is precisely like the double arm system during the second year. About the beginning of September the

shoots may be stopped, which will help to ripen them.

The pruning at the end of the second season may be seen in *Fig. 2*. The object now is to get two arms from twelve to eighteen inches long; that is to say, arms that shall be thus long when bent in their places. It is important that the arms be of the same length; one cane, consequently, will be pruned a little longer than the other, to make allowance for the length of old wood, as seen in the figure. At the beginning of the next growing season, all the shoots, except the two marked *d*, are to be rubbed off. The buds marked *c* would, if left on, produce some fruit, but only at the expense of the future strength of the vine. The cane at the right hand is just a little longer than that at the left; but if we should cut to the next bud beneath, *c*, this bud would not be on the right side of the cane when it is curved to form the arm. Hence it becomes necessary to say, that the canes must be so pruned that the buds at the end will always be on the upper side when the arms are bent down. This rule must be observed whether the arms are

bent in reversed order or not. When the arms are bent in reversed order, the terminal buds must always be on the outside. When not reversed, the buds must be on the inside. When the arms are bent down, the buds will then be on the upper side.

The vine shown in *Fig. 2* is not the same as shown in *Fig. 1*. Another vine was selected in order to give the reader as many examples as possible of variety of growth. The vine in *Fig. 1* is the Creveling; that in *Fig. 2* is Rogers's Hybrid No. 15, which has shown remarkable vigor. The trunk, *f*, came from an under-ground bud. The stump, *e*, was pruned early and close, and the new shoot drawn over to a stake; the growth consequently looks as if it were almost continuous. Such niceness is not necessary, and may very well be left to the amateur who has time, patience, and skill. The bud at *a* was remarkably developed, as may be seen by its having, at the time of growth, drawn out, as it were, a portion of the trunk. It is only, however, a remarkable instance of vascular development.

The third year's growth will be considered in our next.

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#### LETTER FROM JAPAN FROM MR. HOGG.

WE have the pleasure of laying before our readers another interesting letter from Mr. Hogg. His many friends will be glad to learn that he is in the enjoyment of excellent health, and is industriously employed in exploring the country for rare and valuable plants, of which he has already gathered a very interesting collection. Some have arrived in this country, and others are on the way. We are in the way of realizing our expectations, that Mr. Hogg would very materially enrich our collections of ornamental and useful plants. If in doing this he could at the same time succeed in learning the Japanese the use of improved horticultural implements, and subdue some of their peculiar prejudices, he would be bene-

fitting two nations at one and the same time:

*Kanagawa, April 30th, 1863.*

MR. EDITOR,—Although much has been written extolling the climate of this country, my experience of it the past winter confirms all that has been said regarding it. The change from living in a climate of at times almost Arctic severity, to one where the cold is just sufficient to bring about the delightful changes of the seasons, renders it a season of prolonged enjoyment, and really seems to add so many days to the span of life. In the northern and western parts of the country, where exposed to the cold blasts from Tartary, it is said to be much colder; but the ameliorating influences of

the Pacific have a marked effect on the eastern coast. Since the heavy rains of October there has not been much wet weather until about a month past, and then not very continuous, and probably not more than necessary to sustain the growing crops in the porous soil of the country. The verdure of the growing crops gives a charming appearance to the landscape. The entire absence of fences between the fields gives a naturalness to the prospect that is, in a certain sense, delightful, but in another point of view does away with the idea of individual possession so intimately associated in our minds with a homestead and personal prosperity. The yards surrounding the houses are usually inclosed with a rude hedge of *Cryptomeria*, *Retinospora*, *Althea*, or some other strong-growing shrub. Their mode of trimming a hedge is very rough, and it is only occasionally that you see one at all neat and passable as a real hedge. I have never yet seen one clipped pyramidal.

It seldom happens that there is sufficient frost to impede the working of the soil, and during the past winter not once, and there is no doubt it is owing to the fact of the frost not penetrating the soil to any considerable depth that so many plants that are hardy here prove too tender to withstand our climate. Very rarely ice is formed of sufficient thickness for skating. The soil is a deep, black, light loam, much resembling the soil frequently used for growing *Camellias* found in the ledges and at the base of rocks. Much has been said of its productiveness; but in this I think it is more owing to liquid manuring continually applied than to any very great natural fertility. That this is the case is occasionally very apparent, by observing patches of grain in places where manuring has been neglected looking very stunted and yellow. These remarks apply only to the soil on the high lands; that in the numerous intervening valleys, where rice is grown, producing large crops by irrigation alone. In places along the valleys where the surface is too elevated for the purposes of irrigation, and yet too wet for growing cereals, a simple

expedient is resorted to, to bring it under culture for both, by laying it out in sections of the same width, about 30 feet, and convenient length, and then throwing the soil of every alternate section on the top of the adjoining one until of sufficient height. On the raised sections grain or vegetables are grown, and in the intermediate ones rice. With you such lands are chiefly used as meadows for hay or grazing; but here, where little or no meat is used for food, every effort is used in raising grain for the support of the population.

One drawback in gardening here is the want of proper native grasses, in this respect resembling our Southern States. A lawn is a thing almost unknown, as I only know of one attempt in that direction within the limits of foreign residences. The grass used is a native perennial one, but in the winter season turns entirely brown, and loses its beauty. It is a very close, dwarf-growing species, and would be admirably adapted to the purpose were it to keep its color the whole season. A former resident, lately returned, has brought with her a variety of our grasses for the purpose as an experiment, and it is to be hoped some of them will prove successful, although I do not think the Japanese, with their love for miniature gardening, will appreciate them for some time to come.

In common with the Chinese, all their notions of beauty seem to be in torturing into fantastic forms any thing that will answer the purpose, making fish-ponds with miniature bridges a necessary accompaniment in every garden, rock-work imitations of mountains, etc. In their way, some of their designs are very pretty, and have a merit of their own not entirely to be condemned as a branch of the art, and a pleasing appendage where it can be properly introduced. Of landscape gardening, as understood with us, they seem to have no idea.

At the present time the farmers are all busy preparing their rice lands and sowing their seed beds for transplanting. The laborers wade into the deep mud, and bury the noxious weeds that have come up during

the early spring by turning over the soil with a pronged hoe, like your potato hoe, when it is soon covered again by the water rising to the surface, rendering it level again. In one of my rambles I was witness of their mode of sowing the seed. The patches of land used for the purpose are prepared the same as the others, and the seed sown very thickly. After it is sown a man follows with a long-handled broom, like a birch broom, and beats the surface until it becomes almost a liquid mass on the top. I was surprised to find the grain had all been sprouted until the roots had become an eighth of an inch long. I am not aware of the practice in the Carolinas, and this may be an idea that possibly might prove useful.

Vegetable gardening is yet in its infancy here; not that there is not quite a variety grown, but that they seem to have no appreciation of the advantages of prolonging the season of any particular kind by forcing, or cultivating earlier and later varieties, or successive sowings. Peas sown in the fall are now becoming plentiful, but when this crop is gone that is the end of them for the season. The same also with lettuce, now entirely gone. Carrots have been very abundant and fine all the winter. Another vegetable they grow, called the *dy-ku*—a name applied to all the radish kind—is much used among themselves. Large quantities of it are dried or pickled for winter's provision. It is of the radish kind, only very large, averaging 18 inches, and as large in diameter as the top end of a large parsnip, not, however, tapering, but terminating abruptly. It is pure white, having somewhat of a turnip flavor also. Whether it has been introduced since the country has been opened to foreigners I am unable to say, but it is hardly possible its culture would become so universal in so short a time, besides never having seen it previously, although it might have been introduced from Europe. The same might also be said of tomatoes and egg plants, which I saw extensively cultivated in the neighborhood of Yedo, both of very small size. Whether

they are a portion of the seeds distributed at the time of Perry's expedition, or whether they have been cultivated for years past, is a question I am unable to determine. If they are, they have allowed them to sadly degenerate. The question might be asked, "What became of those seeds and others presented since? Were they diplomatically received with bows and thanks, and then quietly cast aside, or really put to practical use?"

The implements of husbandry are of the most primitive and simple description, and few in number. The principal one is a large heavy grub hoe, in common use for all purposes. It is either made of wood, shod with iron, or of the better kind the blade made entirely of iron. The blade is usually about 15 inches long, and 6 to 8 broad, having a short handle, as in a common grub hoe. It is an unwieldy implement, but answers pretty well in their light soil. The difficulty attending its use is, that the worker is continually treading down the newly turned soil. Until some bold innovator changes the custom of going barefoot, or at least wearing something more substantial than straw sandals, the advantages of a spade can not be turned to practical account. They have an implement somewhat resembling a spade, having a long blade without any shoulders for resting the foot. For what particular purposes it is used I do not know. These, together with the pronged hoe, the sickle, a fanning mill, (consisting of a simple wheel in a box resembling the one in use with you,) and an instrument like a small road scraper, made of bamboo with an iron blade in front, and used for raising earth from deep trenches, are about all that are used. Gardeners have very neatly-made sieves, either of bamboo or wire, in addition to the above.

Having extended my letter beyond the limits first proposed, I must postpone my gossip about plants until my next, by which time, if we are not all driven out of the country by the impending war, I hope to interest your readers with a few things that have interested myself. Yours, etc., T. H.

RESIDENCE OF CHARLES F. PARK, ESQ.

BY GEO. E. WOODWARD, ARCHITECT, ETC., 37 PARK ROW, N. Y.

THIS residence occupies a commanding position on the northern end of the Palisades, western side of the Hudson, some twenty miles above the city of New York, the river, mountain, and inland views from which are exceedingly fine, embracing the villages of Dobbs' Ferry, Irvington, Tarrytown, Sing Sing, Piermont, Nyack, and Tappan, as well as Tappan Zee and Haverstraw Bay, the distant Highlands of the Hudson, and the beautiful valleys of the Sparkill and the Hackensack, a section of country rich in his-

satisfactory manner. This style admits of an almost never-ending variety of form and proportion, and in effects of light and shadow at

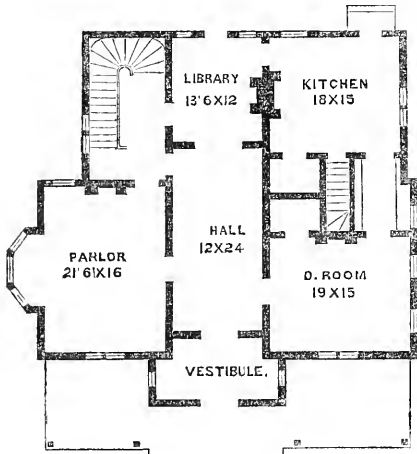


FIG. 26.—First Floor.

toric associations, and highly appreciated by those who seek suburban homes.

This house was designed principally for a summer residence, being nearly fifty feet square, with wide halls and spacious verandah, and commodious and well-ventilated sleeping apartments, the plans showing the arrangement of rooms. The style of architecture selected is that generally known as the Rural Gothic, which, perhaps, is the most useful and most beautiful of any that are adapted to the requirements of our climate. The almost square form of the plan is one of the most difficult to treat successfully in this style, yet has been carried out in the most

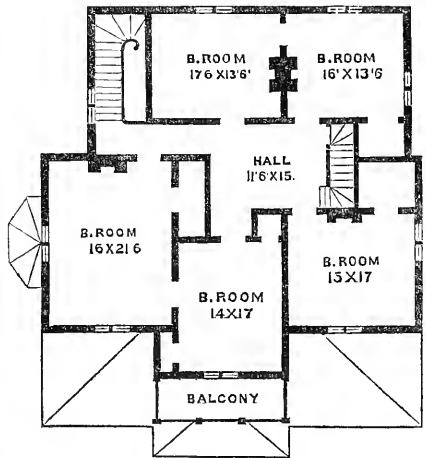


FIG. 27.—Second Floor.

all hours of day is unequalled. Its comparative expense but little exceeds the hipped and Mansard roofs.

The building is constructed in the most thorough and workman-like manner, and is as

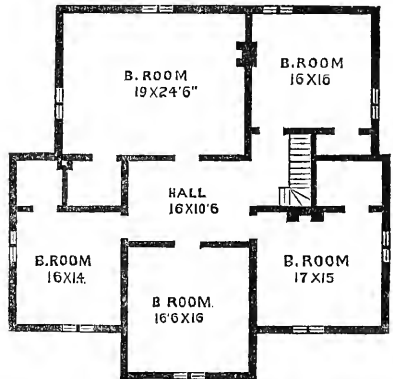
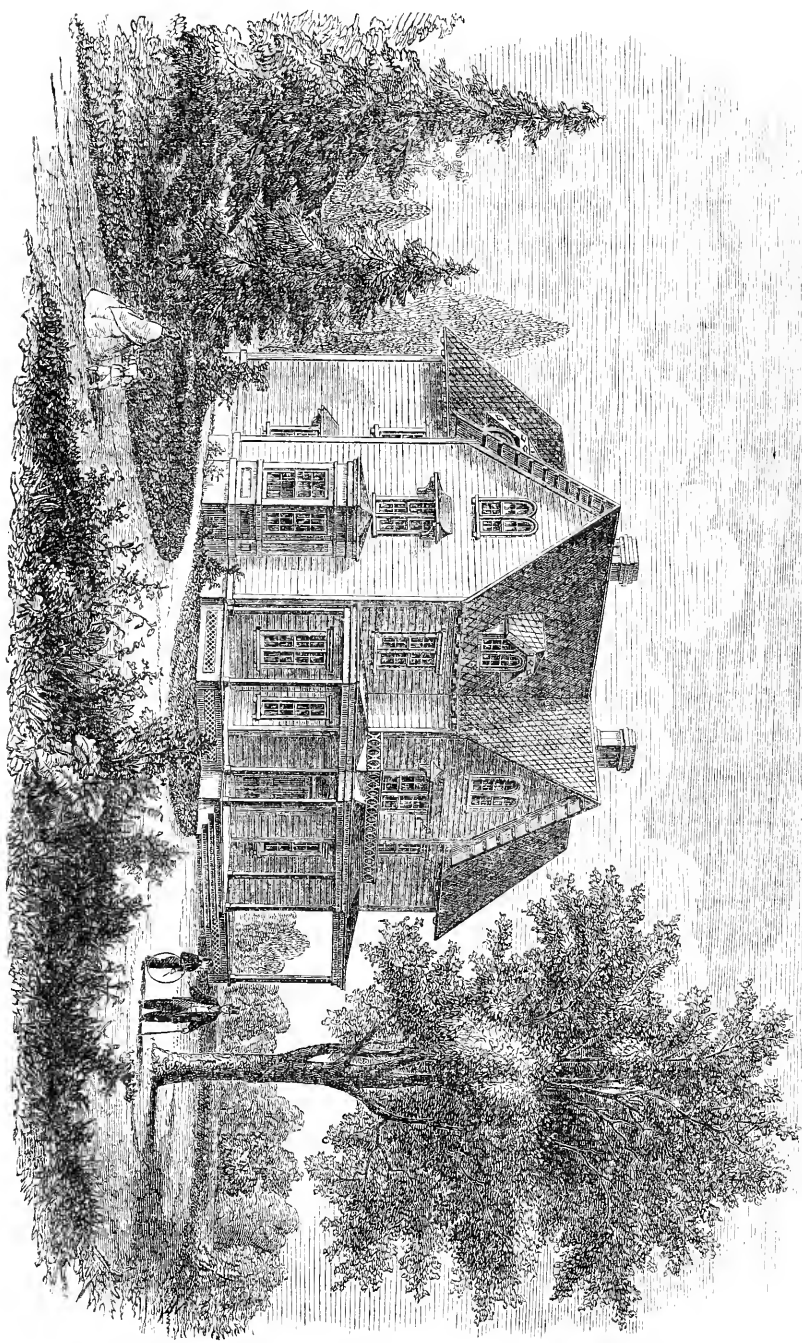


FIG. 28.—Third Floor.

well adapted for a winter residence as for summer. The frame is built in the balloon style, (the strongest known form of framing,)



RESIDENCE OF CHAS. F. PARK, ESQ., NEAR SNEDEN'S LANDING, ON THE HUDSON.

GEO. E. WOODWARD, ARCHITECT, 37 PARK ROW, NEW YORK.





with deep studding filled in with brick, having double air chambers, is thoroughly finished throughout, is covered with a slate

roof, and fulfills all the requirements of a substantial and commodious country residence.

CARRIAGE HOUSE AND STABLE.

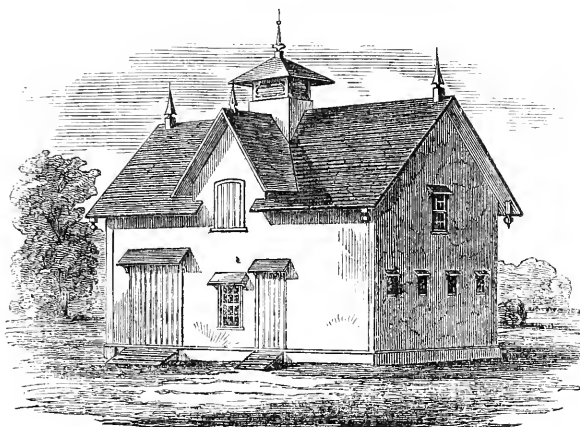


FIG. 29.—Stable.

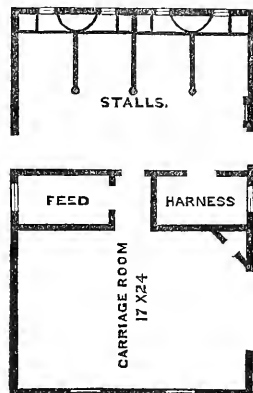


FIG. 30.—Stable Plan.

This design for a stable slightly varies in its exterior from the one prepared by us for Mr. Park. It is well calculated for the ac-

commodation of three or four horses, and affords all the conveniences requisite to keep things in order with the least amount of labor.

## CULTIVATING FRUIT TREES.

BY PRATIQUER.

AN inference may be drawn from the writer's experience in elucidation of this subject. In 1855 a farm was purchased, on which were originally 108 choice apple trees, set out ten years before. The farm having been rented for five years to A. Skinner, no care was given to the trees in that time, but the grass was regularly cut, made into hay, and carted off to market. On examination in the spring of 1856, when I took possession, seventy-seven of these trees were worthless: destroyed by worms and other causes. Having no other manure, I applied to the three acres of orchard 100 bushels of lime ashes from a neighboring lime-kiln, plowed in the sod, planted with corn, kept the weeds down, and the following season seeded down with timothy and clover, and this has remained in grass ever since, yielding about one and

a half tons per acre annually. The cultivation gave to the thirty-one remaining trees a new growth, and in the fall of 1862 I gathered, for the first time, about a bushel of apples from each tree.

In 1857 I set a new orchard of three acres about four hundred feet distant from the above, with young trees; plowed and harrowed the ground, raised fodder corn between the rows, and have kept the ground stirred every season until the present one, when the scarcity of labor has prevented me from plowing it. Last year I had the rows forked up, but not manured at any time, and now the promise of fruit from each tree far exceeds that of those planted twelve years before.

*Case 2d.*—In the spring of 1856 I had a number of Pear and Cherry trees set in grass

land, adjoining my lawn. I was anxious to get my trees set out at once, so that they might be growing, instead of losing a season to prepare the land. But my gain in this respect was on the wrong side of the profit and loss account. It was a loss of time and expenses, as I shall endeavor to show. These trees, seven years in grass, scarcely grew any until dug around and cultivated last year.

In 1858 I ordered from a Rochester nursery more Pear trees than I could accommodate in cultivated ground, and accordingly set the standards in grass near those planted two years before. The holes were dug of ordinary size, and rich earth (compost) mixed with the soil; but the grass soon enveloped the trees, and so remained for four years. As neither the plantings of 1856 nor 1858 appeared to grow or gain any thing, I directed my workman, in 1862, to dig around them six feet across, remove the sods to the compost heap, and make the ground mellow. The Irishman's spade was like an enchanter's wand; there was no need of the magical words. The trees were relieved of an incubus; they began to grow; new, long, and vigorous shoots put forth. They advanced more in 1862 than in a whole (tree's) lifetime before, and this year are making fruit-buds. Unintentionally, some half dozen Pear trees were omitted. The conjurer's spade did not reach them. To-day (July, 1863,) I measured two Zoar Beauties, of equal size and quality when planted, one cultivated, the

other not. The first is eight and two-twelfth feet high after pinching, and seven and three-quarter inches in girth. The latter, with nothing to pinch, is four and ten-twelfth feet high and five and one-half inches around the body; both measurements four inches above the ground. Other trees of the same quality in every respect, which were planted in cultivated ground in 1858, now measure eight and seven-twelfth feet high after heading in by summer pruning, and ten and one-quarter inches in circumference. I know of no other cause for this difference than cultivation, and shall be pleased if you, or any of your contributors, will assign a valid one. My advice to all inexperienced cultivators of fruit, and to new beginners, is, first to prepare the ground, and then to cultivate your trees. You will save time, enjoy your fruit earlier, have it of better quality, and more of it. When these results are attained, you may, *if you choose*, let your trees "*go to grass*."

[This is to the point; and similar cases might be multiplied *ad infinitum*. Scores of them have come under our observation. The difference between the trees on your lawn was owing altogether to the fact of a part of them having been taken out of grass. Remove the sod and mellow the soil around the remainder, and they too will at once start into a new growth. The sod robs the tree of both nourishment and moisture. All who have failing orchards should plow them up.—Ed.]

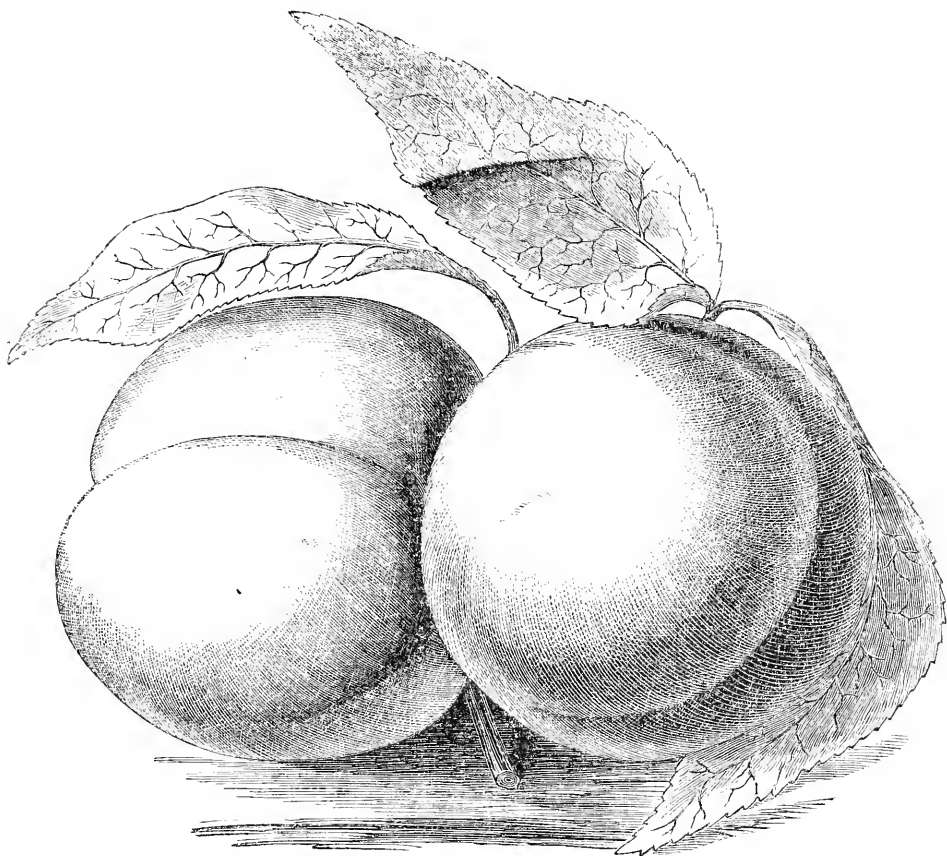
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### HALE'S EARLY PEACH.

BY THE EDITOR.

SEVERAL of our correspondents, it will be remembered, have sent us favorable accounts of Hale's Early Peach. These accounts induced us to express a wish that somebody would send us a sample to test. This has been kindly done by Mr. Pullen, of Hightstown, N. J., well known as an extensive Peach grower. The specimens were received on the 2d of July, in fine condition. We

have had an engraving prepared, and herewith present it. There seems to be no doubt that it is the earliest good Peach we have; it is, therefore, valuable. The Peach is one of the few fruits we "hanker" after before we can get them. A good kind, therefore, that will anticipate the usual season by a week or ten days, will be welcomed by all. We are much pleased with this Peach, not only for



HALE'S EARLY PEACH.

its earliness, but for its goodness. It is early, handsome, and good. The reader has already been made familiar with its history; but we may add here a description of the fruit.

*Size*, medium. *Form*, round, depressed at the top, with a deep suture extending around half the fruit. *Skin*, greenish yellow, with a deep crimson cheek. *Flesh*, white, juicy, sweet, and well flavored. *Stone*, small. *Glands*, small, globose. It is a free-stone Peach, with large, long, deep green leaves, slightly serrated on the edge; midribs white. The new wood is light green, last year's wood being shaded red.

Mr. Pullen's letter contains some interesting items in relation to the earliness of this

Peach, and we therefore make the following extract:

"It is a new Peach, and ripens from six to ten days before the Troth's Early Red or the Early York, (Serrate,) the two latter Peaches being the earliest known for orchard culture. The above I consider valuable on account of the earliness of its ripening, which adds from six to ten days to the peach season; and the more valuable because it ripens in the first part of the season, making it valuable for North and East.

"The inclosed fruit I grew in my orchard [house.] I placed the tree by the side of the Troth's Early, in order to find the difference in the time of ripening, and find from six to

ten days in favor of Hale's Early. I have quite a number of new Peaches and some Nectarines in my orchard-house. If you would like to have specimens sent you, I will forward them to you, if you will notify me. The fruit will ripen during July and August, some few of the latest not before September. If you could make it convenient, I should like to have you visit my place during the present month, when you could see some of the Peaches and Nectarines ripe upon the trees."

It would afford us much pleasure to accept your kind invitation, and we will do so if we can find the time. If we do not, will you be so good as to send us specimens of the fruit alluded to above? Some years ago we used to make an annual visit to the Peach orchards of old Monmouth, and, for the time being, fairly reveled in ripe and luscious Peaches. Few but those who grow them know what a luscious thing a ripe Peach is. We are always glad to receive samples of new and promising fruit.

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### RUSSELL'S STRAWBERRY.

BY S. EDWARDS TODD, AUBURN, N. Y.

As the readers of the HORTICULTURIST are interested in new things which stand upon their own merits as really excellent and useful, we have taken the liberty to prepare a brief notice of this far-famed and most excellent strawberry, known as Russell's Prolific, which has been advertised in former numbers of this journal. We have no pecuniary interest in this berry, and have no other object in view, only to diffuse reliable knowledge concerning it among those who are inquiring about its merits. And, in order to be able to answer those inquiries in a reliable manner, I went to Seneca Falls, fourteen miles distant, on purpose to see Mr. Russell's plants and berries, and of learning something about its origin and productiveness.

Mr. George Clapp, of this city, is the proprietor of the plants, and raised large quantities of most magnificent berries the present season.

A brief history of this plant is as follows: It was originated by Mr. H. Russell, of Seneca Falls, Seneca county, N. Y., in the year 1856, and has been cultivated by himself and Mr. George Clapp ever since, and has proved itself to be one of the best, if not *the very best*, strawberry in our country. It is the largest and most prolific bearer of any kind of strawberries of which I have any knowledge; and, after a trial of six years, it has proved itself to be a berry that has no success-

ful rival. It is not only a pistillate, but a staminate also; and I hesitate not to say that it is very hardy in its growth, and will endure the frosts of winter equal to any other known plant.

With regard to its deliciousness, its productiveness, and size of berries, I *know*—I do not *guess*—that it is superior to any thing that I ever saw or heard of. No man could have induced me to believe what I saw and tasted in Mr. Clapp's and Mr. Russell's gardens, if I had not been permitted to see and taste for myself.

The berries are cultivated in hills, and it was truly astonishing to witness what piles upon piles of them there were in a single hill. In one single hill, which was exhibited at Rochester, there were two hundred and twenty berries! And I counted on a single hill, in Mr. Russell's strawberry bed, twenty-six stems heavily loaded with very large and delicious berries, some of which were as large as hen's eggs.

In order to test the flavor of these berries, as there were a few hills of the Wilson growing in the same bed, I would eat some of each; and, to my surprise, I found that I could detect the difference between these and the Wilson, were I blindfolded. The flavor of the Wilson was so very pungent and acrid, and almost entirely destitute of the delicious aroma which the Russell's Prolific

possesses, that the palate, without the aid of the eye, could determine with certainty which was a Russell and which a Wilson.

[This is a pretty strong notice, and rather more indiscriminate than we are in the habit of publishing. It is all very well to say that a fruit is better than any thing we ever saw, if we think so; but how can Mr. Todd say that he *knows* the Russell is superior to any thing he ever *heard* of? Such looseness materially lessens the value of an opinion, and should be carefully avoided. It is not characteristic of Mr. Todd, and may be put down as a slip of the pen that it would not have been worth while to notice, but for the fact that he lays so much emphasis on it. We happen to

know, however, that Russell's Prolific is a very good fruit. It is one of those kinds of strawberries that "stool" freely, and it does not, therefore, show its productiveness generally the first year. That is the character of the plant in our own grounds, and as we have seen it elsewhere. We mention this to prevent disappointment on the part of those who expect to see its alleged character for productiveness realized the first year. It will require another year to establish its character for productiveness under general cultivation. It is known to produce a very large crop in certain localities, and our opinion is that its character, in this respect, will prove to hold good generally under the conditions we have named.—ED.]

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### PLANT HOUSES.—III. A GREEN-HOUSE AND HOT-HOUSE.

BY THE EDITOR.

PLANT houses having a specific object in view, it is not possible to indulge in a great variety of forms without sacrificing their utility, or creating a great deal of room that can not be applied to any useful purpose whatever. In this respect they differ in a

knowledge of quite a different character. That some degree of picturesqueness, however, is consistent with utility, we think will be apparent on examining the design herewith presented. The plan was made for H. B. Hurlbut, Esq., of Cleveland, Ohio. It

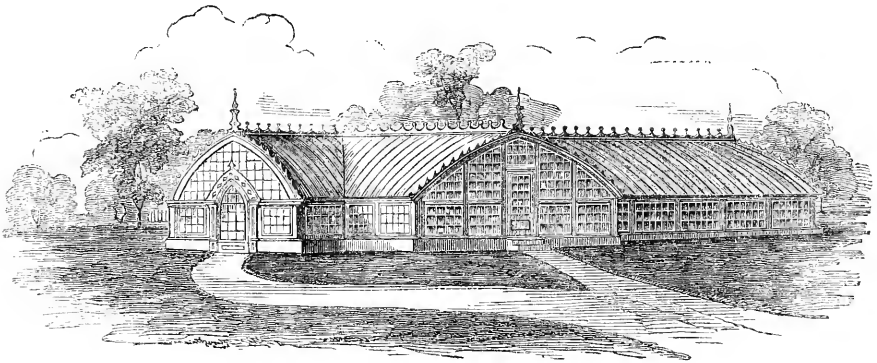


FIG. 1.

marked manner from dwelling-houses, which allow of great latitude in design and construction. It really requires a deeper inventive faculty to design a useful and picturesque plant-house than it does to design a picturesque dwelling, and it requires also a

is intended for a green-house and hot-house combined. It is located near the dwelling and in sight of the public highway. It is in the form of a cross.

*Fig. 1* is a perspective view, as seen from the street. The porch or front entrance is

somewhat elaborated, but with an entire absence of heavy wood-work. The finials and the ornament along the ridge are light and

potting-room. This will be fitted up with a writing-desk, and shelves and drawers for books, seeds, etc. Every other side-sash is

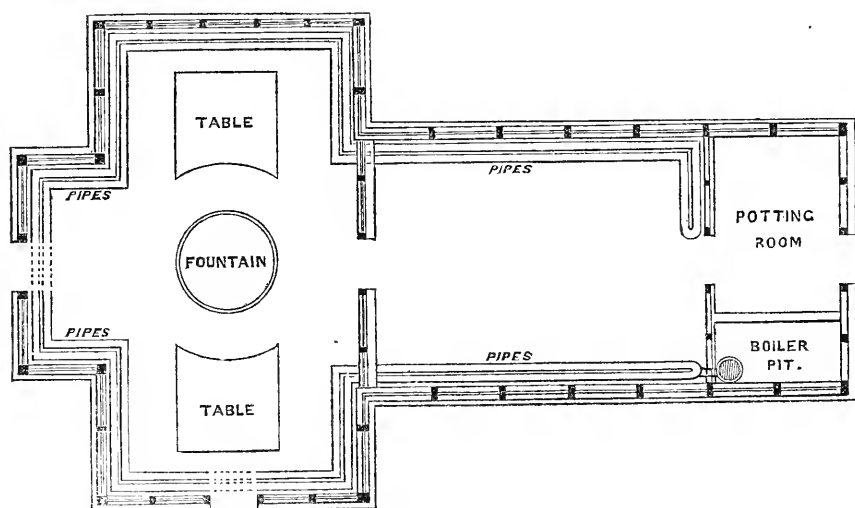


FIG. 2.—Plan.

pretty, and harmonize with the general design. The roof is a continuous fixed roof. The valleys and angles break up the structure in a very pleasing and effective manner, and the elevation, as a whole, is one that will arrest attention.

*Fig. 2* is the ground plan. Directly opposite the front entrance is a fountain, on each side of which vases may be placed. There are two center tables, but the house would be prettier without them. There are tables around the sides of the house, not shown in the plan. This apartment will be used principally for plants in bloom. Passing through the middle door, we come to another apartment, which will be kept at a higher temperature for the purpose of forcing plants into flower. At the end, on the right-hand side, is the boiler-pit, which is partitioned off. It is large enough to hold two or three tons of coal. There is a coal-shoot on the outside. On the left is the

hung at the bottom for ventilation. There are also ventilators on the top, and over the

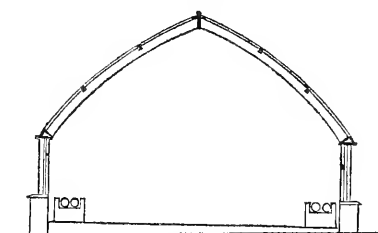


FIG. 3.

doors. *Fig. 3* is a sectional view of the house.

There is scarcely any part of this structure that does not, at some time during the day, receive a portion of the sun's rays; some more, some less. A little judgment, therefore, on the part of the gardener who has charge of the place, will enable him to grow well a large variety of plants.

## THE GREAT BRITAIN PEAR.

BY THE EDITOR.

A PEAR under this name was among those sent to us by Messrs. Ellwanger & Barry. There is some doubt as to its identity, and we therefore hesitated about giving its portrait. We thought, however, that some of

it in several particulars. It seems that there are no less than *five* pears described in foreign catalogues under the name of Great Britain, some ripening in the fall, some in winter, and some in the spring. Whether the pear under con-



THE GREAT BRITAIN PEAR.

our readers who import new pears might probably recognize it, and help to clear up the mystery which surrounds it. Mr. Barry thinks it may prove to be the Spanish Bon Chretien; but it is a much better pear than the Spanish Bon Chretien, and differs from

sideration is either of these, and which, we have not the means at present of determining; but it would be desirable to identify it, if possible, since it is one of the best of late winter pears. It is juicy, and half melting, ripening in March and April.

## COCOA FIBRE WASTE.

BY B. C. TOWNSEND, BAY RIDGE, L. I.

PETER B. MEAD, Esq:—*Dear Sir*,—In compliance with your request, I herewith

give you my brief experience with the "*Cocoa Fibre Waste*," the more willingly as

have received many inquiries in regard to it, by letter, since your issue of this month, and the following remarks may be taken by the gentlemen who addressed me, as an answer to their various queries. First, as to the material itself; it is the *dust* which falls from the fibre in the process of making mats, not the fibre itself, which is tough, stringy, and of no apparent value for horticultural purposes. I mention this, as mistakes have occurred, and some annoyance caused to beginners, they having secured the tough outer husk and fibre, which are of no avail for potted plants or nice work, although I believe that, when used perhaps in their course state, roughly broken up as fine as can be done without too much labor, they would be very valuable if incorporated in the soil when planting young trees, as they would absorb and hold all the moisture, which otherwise would descend in sandy soils below the reach of the young rootlets, or be evaporated in very dry weather. The dust is of a rich brown color, looking like coarse Scotch snuff or fine brown saw-dust, very light in weight, and with remarkable powers of absorbing and retaining moisture. As an evidence, a barrel of it emptied in a heap, thoroughly wetted, and then protected from rain, but exposed to a broiling sun for three summer months, was found to have only become dried for about two inches in depth. Under the shade of drooping evergreens, where the rains or dews occasionally reach it, it is always moist, and this accounts, in a measure, for the luxuriant growth of such evergreens as I have described, although its very gradual decomposition has no doubt an important influence.

It is only by continued experiments that we can learn whether it is equally adapted for all classes of plants. For *some* species it shows itself to be admirably adapted by quick results, and when used in the same proportions with other kinds the results will not be so evident. For instance, used *pure*, Ferns, as far as I have tried, run riot. *Adiantum cuneatum* transferred from a six-inch pot, was full and cramped in a thirteen inch, in three months, with a head thirty-two

inches across; while, on the other hand, used pure for *Achimenes*, *Gloxinias*, *Tydeas*, etc., there evidently is not nourishment enough, while, mixed with half loam, they are finer than when potted in the usual soil.

It would be too tedious, perhaps, for your readers, as well as occupy too much space, to go through with all my experiments, and those interested will doubtless obtain some of it and try for themselves, for there are many things connected with its use, such as watering potted plants, the constitutions of which vary, the question of over-watering, etc., which must be considered. It seems to be excellent as a bottom layer for potted plants, requiring only moderate waterings, acting as a sponge, and draining off readily when the point of saturation is reached. The roots of nearly all plants have a great affinity for it, and it induces in cuttings, apparently, a more robust effort to throw out roots than any other material I have tried, with some few exceptions, the cuttings coming out with large mats of roots. I have also twisted out the crowns of pines, and plunged in this material in the forcing beds, had strongly rooted plants in three to four weeks. In the cutting or propagating beds, which are heated by hot-water tanks underneath, one watering in the commencement of the season is all that is required; in this situation it never dries, even on the surface. I have found it of value in enabling us to use in the blazing sun all day long, decorative plants which we can not use otherwise, except in shade; for instance, the lovely "*Lobelia speciosa*," its rich blue masses completely covering the ground all summer, the ground covered before planting with a coating of waste two inches deep. The plants, say six inches apart when set out, soon reach each other, and give us an effect very beautiful, and that can not be equaled by any other plants. Speaking of "effects" in bedding plants, I wish you could see that produced by the new "*Coleus Verschæfeltii*" in a circular bed about twelve feet in diameter, plants, say fifteen inches apart, and kept pinched in to a height say fifteen inches, the leaves of each plant now, at this writing,



meeting "en masse," with a center piece of "Centaurea candidissima," the purest white-leaved plant now grown, the whole edged with "Alyssum variegatum." It is very new and striking, and our English cousins can't do it much better, either at Sydenham or Kew; but this digression is out of place when on the subject of Cocoa Waste. Lest I should omit it, I will mention in regard to the vines struck at your request, I found that in the sand, with the same bottom heat, roots were pushed two or three days earlier than the same cuttings in the "waste," but by careful examination I observed that the "callus" was much larger and more robust in the waste than in the sand, apparently gathering increased strength for the start by reserving its forces until fully ready, and when they did start, soon passing by those struck in the sand, and, as you observed, maintaining their advance when under way so as to be easily appreciated as stronger plants.

I do not look upon this trial, however, as entirely conclusive, and must repeat it upon a more extended scale before recommending it positively; for during the experiments, what with press of other work at the time, I discovered once or twice that the cuttings in sand had been allowed to become rather dry. If the sand had been carefully kept as moist as the waste, the superiority of the waste might not have been so evident. It is conclusive, however, as to the vital point of *regularity* of moisture, and less care required in using the waste.

If we can obtain it in sufficient quantity at moderate cost, we shall, however, benefit more generally, I think, in adaptation for out-of-door purposes, as a mulch and fertilizer, than for the comparatively limited uses for green-house plants and for propagating material. In most of our country residences, evergreens are largely used in decoration, and in some few of the choicest grounds they are the decided and elegant feature; but in how few of them are they properly cared for! Here will come in one of the best uses to which the waste can be applied. Experiments now progressing favorably, will only

require a severe winter to test them, and if they come safely through that ordeal, I can venture to promise an average growth one half greater, and in young trees fully double the annual growth made in the usual mode of planting.

Instead of allowing the thirsty sod to drink up all the light rains, the sod removed and replaced by the waste in a coating six inches deep from the trunk of the tree to the circumference of the outermost branches, is an exchange from an exhausting process to a fertilizing mulch. In this latter point I would observe, that after three or four years the waste becomes gradually darker, until it is almost black. When in this state it is very enriching, as the decomposition of the vegetable fibrous waste is by that time nearly complete, and assimilates very nearly in appearance to rich black loam. In this condition its fertilizing property is evidenced by the immense leaf growth of Geraniums, etc., at the expense of the blooms, at the same time still retaining its qualities as a retainer of moisture. This very quality, however, of retaining moisture, is the one point which I am (in our climate) a little uncertain about being to our advantage in a severe winter. The roots so completely fill the waste, that experience may show that, except for the most hardy varieties, the very point which makes it of value in our hot, dry summers, may be very prejudicial in wet, severe winters. Time alone can decide that point. And now, without exhausting the subject, I must certainly have more than exhausted your time and space, and you must curtail this note in any way you think best.

P. S.—I forgot to mention that I ordered the waste from Messrs. Hooper & Co., Covent Garden, London.

[Our readers will all feel deeply indebted to Mr. Townsend for having imported the "Cocoanut Waste," experimented with it, and brought it to public notice. Our "cousins" will probably be surprised to learn that they have been somewhat anticipated in discovering the utility of cocoanut waste for striking cuttings generally.

They, we believe, with the single exception of Donald Beaton, confined its use, until very recently, to mulching, and mixing with soil for Ferns and a few other plants. Mr. Townsend has done much more, as will be seen hereafter. In regard to the grape vine cuttings, we have placed them in a position to carry out the experiment to some decided results. What these will be, we can only at present surmise; but in due time the reader shall have all the particulars. We do not anticipate that the roots of your evergreens will be winter killed, unless they are really on the surface. Much less injury is received in this way than is generally supposed, except in the case of trees that are not altogether hardy. Much misapprehension exists on this subject. The roots of trees are always frozen, and it matters not whether they are frozen six inches or six feet from the surface, so long as the roots are ripe. We predict confidently that the roots of the evergreens growing in the "waste" will receive no injury from being

frozen. Tell your lady friend that we shall take the heads of the "innocents" only as a dernier resort. They would require too much sifting. You have a right to know all the uses to which cocoanut waste may be put; at all events, you have a right to know what becomes of the hogshhead you were so kind as to send us. We put it under a large chestnut tree in our pasture lot, where we thought it would be well protected. The head was partly knocked out, and our experiments began. In the afternoon, in passing by, we noticed the head of our favorite cow in the hogshhead. We hastened to the spot, and found her licking her chops with great gusto. She had consumed quite half a bushel of the "waste," unless she had had some help during the day. But the "waste" was not altogether wasted; for the cow that night and the next morning gave an extra quantity of milk. So, you see, the milk was not all out of that cocoanut! That was our first experiment with "cocoanut waste."—Ed.]

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### THE CONCORD GRAPE.—REPLY TO D.

BY GEORGE HUSMANN, HERMANN, MO.

MR. EDITOR,—In your July number I find an article on the Concord, by D., which seems to me to smack decidedly of a very casual local observation, and which, it seems to me, would serve to mislead your readers so much, especially as it comes endorsed with your opinion, that I can not help making a few remarks on it, to vindicate a grape which is at present planted more extensively in the West than any other, and *deservedly* so, notwithstanding what Mr. D. may say about it.

Mr. D., from the general tone of his remarks, seems to live in some cold nook of our Union, where even the Concord will not ripen; for it is plain that he has never tasted of a *ripe* Concord. Pray be quiet, my dear D., until I have explained what I mean. I do *not* call a grape *ripe* when fairly colored, but when it has attained its

greatest excellence; and the Concord is one of those grapes which, indeed, color early, but which should hang a month longer to attain their full perfection; and this, it seems, it never comes to in the East. If Mr. D. and you, Mr. Editor, would come and visit us some time in September next, I will engage that you will go home with a better opinion of the Concord. You would then find it almost without pulp, the pulp having almost dissolved; of fine flavor, although *very slightly* foxy; thin skin, sweet, and, if not *best*, at least *very good*. Please do not, with your Eastern States, claim to be the *whole* Union. We here, in Missouri, have struggled hard enough against Secession to deserve at least a slight consideration at your hands; and if you condescend to acknowledge that the Western States also are a part of "our country," let the

Concord have its just dues here, as the *best grape for every body*.

This is a bold position to take for any fruit, but I take it after trying it for seven successive years, and after comparing it with about sixty varieties I have in bearing, and also after due consideration of pros and cons. Now let us see why :

1st. The vine is a strong, healthy grower, and will succeed in any soil, so as to give a fair crop under any treatment.

2d. It is entirely free from disease, and entirely hardy.

3d. It is, under proper treatment, a great bearer, and always ripens its fruit well.

4th. It has a fine, large, handsome bunch and berry, which sells readily in market, not because, as D. somewhat maliciously remarks, people do *not* know it, but because they begin to know it, and appreciate its very good quality. Our genial sun here does what D. makes a condition of the Concord getting into favor with him, it dissolves the pulp, and fills it, not exactly with Delaware juice, but with something which is not bad to take either, being sweet and luscious enough for most folks. Please do tell us, D., where you hail from, as a country where the Concord does not grow any better than you represent it must be not very far removed from everlasting "snow and cold fogs."

5th. It is a good *wine* grape, as it makes a wine equal, to my taste and a good many others, to the best Catawba, if not superior, and we pretend to know here what good Catawba is, having grown it for sixteen years. It also makes more of it than any other grape I know of, to the acre, as it has, when fully ripe, not only from three to four drops of thoroughly sweet juice, as D. has it, but about fifty to each berry, as it is nearly all juice.

I think this answers the question, what we can do *here* with such big fruit. As D. has seen fit to put the Concord and Delaware in juxtaposition, I will do so too, and give your readers a few samples of success in vineyard culture with both varieties.

In spring of 1861 I planted 350 vines of

Delaware, on the best piece of ground I had in my vineyard. The vines I obtained of Dr. Grant, of Iona, and they were what I call good plants from single eyes. They were planted late in May, started finely, and were all I could wish until the latter part of July, when they were affected by leaf blight, dropped their leaves, did not ripen their wood, did not grow any worth speaking of last summer, and now, the third summer, the young canes are not over two feet high as yet. When they will bear will be hard to tell, although they have had good cultivation throughout.

After the Delaware I planted 500 Concord, on rather poorer soil. The plants were hardly worth that name, as I had sold my entire stock, and the remainder, such as I could not and would not sell to any body, were planted by me, being hardly as good as first-class cuttings. They all lived, however, made a good growth the first summer, and were entirely healthy. Last summer only one cane was tied up on each vine, which were cut down the middle of June by a very destructive hail-storm, when about three feet high. On these young canes the suckers started vigorously, and made very fair-sized vines. The remainder of the young canes I had not tied up were summer layered in July, and I had over 7,000 first-class layers from the 500 vines. This spring I pruned those I had tied up, somewhat in the same manner I would cut back a young tree, leaving three to six eyes or buds on each of the branches, and they are now loaded with as fine a crop of fruit as ever gladdened the heart of any vine-grower, and are making a strong growth of wood for next year's bearing. They will average 10 lbs. of grapes per vine, which, considering the amount of layers they produced, I think is a great yield for the third summer after planting. The grapes I can market readily at from 15 to 20 cents per lb., wholesale, and they would be worth just as much to make into wine. I leave you to draw your own inferences as to which is the most profitable grape.

I am sorry to say the Delaware has not

fulfilled its early promise here. It is certainly a fine grape, but seems to be subject to leaf-blight here, and a very feeble grower on its own roots. This, however, can be remedied by grafting on stronger growers, and we are still in hopes to find out a method by which we can cultivate it successfully. But I can not recommend it *here* for general cultivation.

In conclusion, let me say a few words in regard to D.'s very unjust cut at nurserymen. We have no difficulty here in growing the Delaware from cuttings; although it does not grow so readily as Concord and other varieties, it brings treble the price of them in the sale of the plants, and can, consequently, be grown just as profitably as the Concord by nurserymen. Norton's Virginia is, I suppose, the hardest vine to propagate I have ever tried; yet we recommend it for wine-making, *because it has real merit*, and we propagate it largely, too—even by the hundred thousand—and sell it as low as the Concord. Let me tell D. that there are other methods of propagating grape vines besides those he mentions, which some few of us happen to know and follow, and that there *are honest* nurserymen who would not think of selling a vine or plant *because* it is easy to propagate, but who aim to sell those from which they think their customers will derive the greatest benefit. Our friend D. would almost force us to believe that he lived in the most god-forsaken corner of our broad land, where his whole surroundings consisted of cold fogs and rascally nurserymen, to judge from the tone of his article. Truly a pleasant neighborhood.

Now, Mr. Editor, I think that you and friend D., in justice to the Concord as well as to nurserymen, owe the far West a visit. It will be no more than simple justice to your numerous friends out here to come and see, and judge for yourself what suits us western people *here*. Do pay us a visit some time in September, and we will try and make you as welcome as "the flowers in May;" and I will even engage to furnish Concord grapes, which you can eat after the Delaware, without making a wry face.

Some other time, if not transgressing too much upon your space and the patience of your readers, I will send you a report on about sixty varieties of grapes, which I have been testing for several years.

[As Mr. Husmann is considered at the West a champion of the Concord, we are rather glad than otherwise that he has responded to D. We shall leave D. to make his own defense. We stated that D. was a Frenchman; he could not, as a matter of course, with his tastes and experience, be expected to rate the Concord as highly as the Delaware. We think Mr. Husmann has somewhat misapprehended D. We do not believe he intended to impute any dishonest motives to nurserymen. He states his belief that some of them try to sell most of that which they can propagate most easily; and this is true of other things besides grapes. It is quite natural that they should do so till the public are willing to pay them an extra price for what costs them extra labor. We will state a few things that D. will not be likely to state. He is in a region admirably adapted to grape-growing, and where the Concord will ripen perfectly. He has been brought up among vines, and has propagated more of all kinds than any two, or probably five men in the country; he has certainly propagated more Delawares than any dozen men among us. It must, therefore, be conceded that he knows something about propagating vines. He is a person for whose opinion on the subject of grapes we have much respect, though we may not always agree with him. Mr. Husmann states that he finds no difficulty in propagating the Delaware from cuttings in the usual way, and we are bound to believe him; and yet we know that D., on this point, states a simple fact that very generally holds good. We have time and again had old nurserymen come to us and acknowledge their inability to propagate the Delaware from cuttings in the open air, and some have failed for years to do it even with the assistance of a hot-bed, which should not be. Our own experience tends to the same conclusion. Though we have

raised some cuttings of the Delaware in the open air, we are, nevertheless, bound to accept the generally-admitted fact, that it is very difficult to raise in this way. There are other vines almost as much so. We find nothing to modify in our remarks appended to D.'s article. So far as the Concord is concerned intrinsically, there is not much difference of opinion between us, except that Mr. Husmann rates the Concord higher than we do, though he candidly admits that it is not first-rate. We think it is several removes from being first-rate. It is hardy, early, vigorous, productive, large, handsome to look at, pleases the eye, and therefore sells well in market. It is the latter point which makes it profitable to grow at present, and not its quality, which is only good, and not best. We have been familiar with the Concord since the day it was sent out. No grape, that we can remember, except the Charter Oak, was so universally decried on account of what was termed its "offensive foxy odor." At the beginning of this warfare against the Concord we were called upon, in an official capacity, to give our opinion of it, the specimens then before us, weighing about a pound to the bunch, having been furnished by the Messrs. Hovey. We have not got the volume by us to quote from, but our opinion, carefully made up, was substantially this: that the strong "foxy" odor of the Concord would, in a great measure, disappear under the influence of time and good culture, and that its large size, handsome appearance,

earliness, and productiveness would make it popular and valuable as a market fruit. We leave Mr. Husmann to say how far our predictions have been fulfilled. We have seen the Concord under a variety of circumstances, and have had it sent to us from many different localities, but we have never seen it first-rate. If any of our readers during the coming season should think they have it in this condition, we shall esteem it a special favor if they will send us a sample. If you can not grow the Delaware, Mr. Husmann, and can grow the Concord, the latter, of course, is the grape for you; but for those who can grow both, the Delaware will prove to be the most profitable, supposing both to be grown in the best manner possible. We appreciate fully the labors of our Western friends in the great cause of grape culture. So far from saying a word to dampen their ardor, we esteem it a privilege to be a co-worker with them. In this good work, for which you must admit we have done something, we bid you all Godspeed. One word more. Your invitation to visit Hermann is put in such a kindly spirit, that we not only thank you, but promise to accept it if we can find it possible to do so at the time you name. What with grapes, grape juice, and grape talk, we could anticipate a most delightful time with you and other genial spirits whom we should doubtless find there. But one condition: we intend to make the Delaware thrive in Hermann, and you must do nothing to prevent us.—ED.]

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LEON LE CLERC DE LAVAL PEAR.

*Synonyms* { LEON LE CLERC.  
                  { BLANC PERNE.

BY P. BARRY, ROCHESTER, N. Y.

It is stated by M. Bivort, in the "Annales de Pomologie," that this pear is one of Van Mons' seedlings of 1816, and fruited the first time in 1825. Named by Van Mons in honor of M. Leon le Clerc, who was himself a pomologist.

It has been frequently confounded with the

"Van Mons' Leon le Clerc," which was raised by Leon le Clerc in 1823, and named "Van Mons." This latter fruit, the "Van Mons of Leon le Clerc," though one of the largest and finest of all pears when perfect, is likely to be abandoned in this country on account of the unhealthy character of the tree

and the tendency of the fruit to crack. We can well remember the sensation produced by it on its first appearance in the catalogues; but, as in many other cases, the hopes it awakened have been realized in a very limited degree.

The Leon le Clerc de Laval has also failed to come fully up to expectations, but is nevertheless a valuable fruit. We expected, from the foreign descriptions of it, that it would be a table fruit, melting or half melting, and a very long keeper. After many years of experience, we find that it is rarely if ever more than *half* melting; but of that class of pears it is one of the finest in cultivation. It is a noble pear in size, shape, and color, and keeps the year round. We have them now (June 18) in fine condition, fit for dessert even, and to all appearance they will keep sound until the early pears are ripe.

The "Annales de Pomologie" describes it as "a superb fruit, and perhaps one of the best of its season, (May and June,) and that it requires a warm, light soil."

*Fruit* large or very large, three to four inches long, and about the same in diameter at the broadest part, obovate or obtuse-pyriform, somewhat resembling the Beurré Diel. *Skin* thick, of a bright golden yellow at maturity, clouded and dotted thickly with cinnamon russet. *Stalk* one and a half to two inches long, curved, moderately stout, en-

larged at the base, and inserted without depression. *Calyx* rather small, open, in a broad, shallow basin. *Flesh* white or yellowish white, fine, half melting, juicy, sweet, and agreeably perfumed. Season April to June, retaining its color, plumpness, juice, and flavor remarkably.

Tree a vigorous, handsome grower on both pear and quince stock; hardy, and an abundant and early bearer.

The synonym "Blanc Perné" originated either in France or in the Island of Jersey. We received it from England only under this name. The French are in the habit of attaching names of their own to new Belgian varieties; as, for instance, in the case of the Belle Lucrative, the original name of which, given by Esperin, was "Seigneur," now superseded almost every where.

[We had applied to Mr. Barry for some particulars in regard to the habit of growth, etc., of the Leon le Clerc de Laval, figured in our last number; but being from home, he did not send the above till after our form had gone to press. We therefore printed our own description. Mr. Barry's, however, contains some interesting particulars in addition to what we gave, and we therefore print his article this month entire. His description of the fruit and our own will be found substantially the same.—ED.]

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## GOOD BUILDING SITES IN THE COUNTRY.

BY MYRON B. BENTON, AMENIA, N. Y.

IN looking upon the fine residences with which men of ample fortune have adorned the country, the farmer is profoundly impressed with the great outlay required to make and keep such luxuries. One of moderate pretensions will require annually, in the matter of men's labor alone, more than his farm of a hundred acres or more would to keep it in a good state of cultivation. The very pleasure which he has in walking over such grounds is alloyed with regret that it

is so entirely out of his reach to create such a landscape around his own dwelling.

This out-door upholstery is of the most delicate kind, and requires the most unremitting care to preserve it. If it were so much parlor furniture, as carpets, curtains, pictures, statuary, etc., though the first cost might be greater, yet in the end it would be far cheaper; for all such can be inclosed from the weather, and preserved year after year with but little comparative labor. But

it is not so when we undertake to assist Nature in her works. She delights in constant changes. She is never satisfied without her pets are either growing or dwindling out of the way. Every thing must be in motion. So the lawn is forever needing to be shaved, the flower-beds weeded, the shrubbery trimmed, etc.

The amount of labor which the farmer, who has his living to produce from his farm, can lay out in the grounds immediately surrounding his dwelling, is necessarily limited. But the question which we should consider is, Does he make the most of his circumstances? does he produce the most attractive residence that his means and the natural features of his farm will admit of? The answer may be found in noticing the building sites usually selected by farmers. As a general rule, they are not situated among the best specimens of the natural landscape, which would be more beautiful to have surrounding the dwelling than any thing which money can produce. Imitations of these are often attempted, and always with but partial success. Observe the artificial rock-work, which is so expensive, and compare it with some of Nature's own work of that kind, which almost any farmer—who does not live upon a dreary western level—can show upon his own farm. The water scenery of a park is one of its most expensive adornments, and is often the most unsuccessful. If there be any beauty in water it is in its clearness and freshness; but in very many fine grounds it is brought in a limited quantity with great trouble from a distance, and distributed into fountains and ponds, which it makes one sick at the stomach to look at, it is so green, stagnant, and, in fact, filthy.

If one can place his house where Nature has already supplied these attractions—her picturesque rock-work, her streams, lakes, and all that irregularity which gives the charm of variety, how much more is obtained than a great outlay will create! I fear this is not often enough thought of. The building site generally selected, if not a dead level, is entirely without any marked features of natural landscape. The house has been sub-

jected to military drill, and has obeyed the "right about face" of the street, from which it is separated by the inevitable white picket fence.

But yet, perhaps, in a situation which would have been equally convenient for the practical purposes of the farm, there is a spot where the house could have been built so as to include in its near surroundings some of the sweetest beauties of the landscape: the shore of a clear, azure lake, perchance; a winding stream, or a little rivulet, with its string of musical cascades; or, perhaps, some massive ledge of broken rocks, woven with vines, shrubs, and the coiling roots of trees that crown its summit, or some last remaining specimen of the primitive forest, or a deep shady glen filled with wild-flowers; or a little green hollow, cosily shut in from the rest of the world. A combination of some of the best of these may be found upon most farms; and the farmer, though he may enjoy their beauties at a distance from his dwelling, can reap tenfold more delight if he lives in their midst. The part which he adds beside his dwelling may be very insignificant; some shrubbery which requires but little care, a few choice flowers, and trees. He needs trouble himself little with long gravel walks, which must be constantly hoed and trimmed; for the grass, except in parts most used, is better to walk upon; and above all, as I have before remarked, let him restrain any inordinate propensity to set out trees. The plot of a half acre, or acre, which perhaps lies between the house and a lake or river, and is inclosed on one side by "rock-work" and on the other by a grove, glen, or rivulet, should be unbroken. Leave that for the sunshine, and do not thrust into it the eternal rows of Horse-Chestnuts, Locusts, Ailantus, etc. The farmer's Buckeye Mower will keep this little lawn in good order with slight labor.

I am confident, that if we farmers but rightly select our building sites, we can maintain beautiful grounds around our dwellings, with no extra expense, and which might well be the envy of many a proprietor of a residence which has cost its tens of thousands.

[Mr. Benton has hit upon a very fruitful theme, and his remarks are to the point. Nine tenths of our farmers locate their dwellings on the very worst spot the farm presents, so far as landscape beauty is concerned. It may be doubted, indeed, whether such an idea as landscape beauty ever enters their heads in locating their homes. Nearness to the road is the prevalent idea. We think they might, by following Mr. Benton's suggestions,

obtain all the conveniences they now enjoy, and at the same time surround themselves with a degree of rural beauty which would greatly enhance all the enjoyments of life, and this, too, without any greater outlay of labor and money than they now indulge in, and in some cases not so much. We commend Mr. Benton's remarks to that class of readers for which they were especially designed.—ED.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

LATE THIS MONTH.—We shall probably be late with the present number. It is owing to the fact that the city of New York, for several days, was a prey to the mad acts of a vile and ruffian mob, who murdered our citizens, destroyed public and private property, closed up many of our manufacturing establishments, and set all law at defiance. New York is covered with mourning, shame, and disgrace. Our printer was compelled to close his establishment, and work on the HORTICULTURIST was suspended for a week. Such scenes, we hope, will never be enacted here again.

CORRECTIONS.—It unfortunately so happened that we were unable, last month, to give to the proofs of the magazine the personal attention we usually bestow upon them, and which is absolutely necessary to secure their accuracy. The consequence has been the occurrence of errors, some of them odd enough. A few of these it becomes necessary to correct. The last two letters were printed without our remarks being appended. These omissions are supplied in the present issue. It becomes necessary, too, to lessen a little

the magnitude of Royce's Peach tree on p. 221, second column, line six from top. It will be quite large enough if reduced to 38 inches in circumference instead of 38 feet. Royce, of course, is in no way responsible for the enormous size of that Peach tree. In the same article, line 19, column first, read "albumen" for "alburnum."

FAIR OF THE AMERICAN INSTITUTE.—We are glad to learn that the American Institute has determined to hold a Fair this year in the month of September. This will be its Thirty-fifth Annual Fair. The Horticultural Exhibition will take place during the last week of the Fair. Articles for this department must be delivered at the Academy of Music, in Astor Place, Fourteenth Street, on Wednesday morning, September 16. A liberal prize list has been provided. This will be a good opportunity for pomologists to show their fruit, and especially for nurserymen. The building selected is well adapted to the purpose, and is conveniently located. We bespeak for the Institute a liberal support from fruit growers and florists, as well as from the public. We shall be glad to see the American



Institute regain its former prestige, prosperity, and usefulness, and all this can be done with judicious and liberal management.

DEATH OF DR. JOHN A. KENNICOTT.—We regret to learn of the death of this veteran pomologist. He was esteemed by a large circle of friends for his manly worth, and not less for his labors as a pomologist. He was one of our Western pioneers in the cause, and did a good work in his day and generation.

ORNAMENTAL-LEAVED BEDDING PLANTS.—Having grown *Coleus Verschaffeltii* in the border last season, and found it to be admirably adapted to the purpose, we recommended it to be grown as a border and bedding plant, and we are pleased to find our recommendation pretty extensively followed the present season. Mr. Townsend, of Bay Ridge, elsewhere speaks of the striking effect of a bed of *Coleus Verschaffeltii*, with *Centaurea candidissima* as a center piece, and Variegated Alyssum as an edging. Since receiving Mr. Townsend's letter, we have seen this bed, and we feel called upon to say that the effect is charming; in its style we have never seen it equaled. The center piece, *Centaurea candidissima*, occupies two feet; surrounding this is the *Coleus*, four feet in breadth; and then the edging of Variegated Alyssum, a foot in width, the bed being twelve feet in diameter. The contrast is exceedingly beautiful. This bed is fully exposed to the sun, which the *Coleus* bears well; its color, however, is not quite so dark as another bed somewhat shaded, but it is more brilliant and metallic. The *Coleus* is destined to become a very popular plant.

Near the first-mentioned bed of *Coleus* is a circular bed of Scarlet Geranium, edged with *Sedum variegatum*. The effect is very fine. We are inclined to believe that this *Sedum* will prove to be hardy in some portions of the country. We know that it will bear being frozen pretty hard. This point will be fully tested next winter. Speaking of ornamental-leaved bedding plants, we wish to say here, that our experience with *Fuchsia Meteor* thus far, leads us to believe that it will make a

beautiful bedding plant. It bears the sun very well. It should be planted from twelve to eighteen inches apart, and frequently pinched. The beauty of this plant is in the new growth; close planting will mass it, and pinching will produce a constant young growth. We suggest to Mr. Townsend that he try the *Meteor* as a bedding plant.

AGRICULTURAL DEPARTMENT—LAW RELATING TO SEEDS, CUTTINGS, ETC.—The law relating to seeds, etc., which restricted the weight to *twelve* ounces, has been amended so as to read as follows: "The weight of packages of seeds, cuttings, roots, and scions to be franked, is limited to *thirty-two* ounces." This increases the facilities of the Department of Agriculture very materially, and we are glad to see it, because we think we can perceive on the part of Mr. Newton a praiseworthy desire to render his department a substantial benefit to the country, as it might and should be. We were indebted to him last spring for a collection of valuable seeds. We had determined to say nothing about them till we had proved them, as we had seen so many sent out by the old department that were false and worthless. We must now do Mr. Newton the justice to say that he manages things very much better, and much to his credit. We shall be very happy, under such circumstances, to give him a hearty support. We understand that some valuable cuttings and plants will be distributed next fall. We would suggest that such as are new, and thought to be valuable, be distributed in a discriminating and judicious manner, so as to place them in the hands of those who are capable of testing their value, and who are willing to give the necessary time to it. There will be enough of other things, doubtless, for the great indifferent mass who feel no interest in testing novelties. Distributed as such things have usually been, they are entirely lost to the country. Will you be so good as to think of this, Mr. Newton?

HARDY ORNAMENTAL-LEAVED TREES.—We are indebted to Messrs. Ellwanger and Barry, Rochester, N. Y., for a box contain-

ing the foliage of their collection of hardy variegated-leaved trees, the study of which has afforded us a great deal of gratification. Some of them we have growing, and most of the others we have seen; but there are some that are entirely new. Many of our readers will be surprised to learn how many hardy trees there are of this class. We append a list of those sent by Messrs. E. and B. *Magnolia acuminata*, (Ellwanger and Barry,) *Fraxinus Pontue*, *F. salicifolia*, *F. aucubafolia*, *Symphoricarpos*, *Salex caprea tricolor*, Horse Chestnut, Apple, *Acer tricolor*, *Salisburia*, *Prunus padus maculata*, Mountain Ash, No. 1, (Ellwanger & Barry,) Mountain Ash, No. 2, (Ellwanger & Barry,) *Cornus macula*, English Oak, Turkey Oak, Weeping Thorn, New Silver-striped Maple, *Prunus domestica alba*, *P. domestica aurea*. To this list might be added the Purple-leaved Beech and some others. We shall attempt to show in wood cuts the markings on the

leaves of these specimens, and give a description of each. The variegation on the *Magnolia acuminata* is very fine.

#### CATALOGUES, ETC.

*C. C. Abel*, New York City.—Price Current of different sorts of Dutch Flower Roots, cultivated and sold by P. Van Waveren, Jr., & Co., Hillegom, near Harlem, Holland.

*Cutters' Nursery*, Beverly, Adams Co., Ill.—Catalogue of Fruit and Ornamental Trees, Vines, Plants, Shrubby, etc.

Transactions of the Essex Agricultural Society, Massachusetts, for the year 1862.

*Husmann & Manwaring*, Hermann, Mo.—Descriptive Catalogue of Fruit and Ornamental Trees, Grape Vines, Shrubs, Roses, and Plants. 1863, 1864.

Proceedings of the Missouri State Horticultural Society, at their Fourth Annual Meeting, held at St. Louis, January, 1863.

### CORRESPONDENCE.

MR. EDITOR:—In the January number of the *HORTICULTURIST*, for 1862, an article was published, over the signature, J. S. Walter, stating that he was very much perplexed by the conflicting statements and opinions of nurserymen and dealers in regard to what kind of grape roots to buy, and asking your opinion or advice whether he had better buy pot plants with a mass of very small hair-like fibers, or plants with large roots of from one to three feet long, but said nothing about the fibers; and that it was claimed by the latter grower that the small fibers of the first vines would rot or disappear after being transplanted. And as it was stated in the remarks that these opinions of "Doctor" No. 2 were not correct, I thought I would give you the result in the growth of the two classes of vines; and, in order to do so, I send you some cuttings of the vines purchased of "Doctor" No. 2. You will see the size of the wood, and the canes were nine feet long; while those purchased of "Doctor" No. 1

were not more than two feet, and small at that. Recollect that these cuttings are Delaware, the plants one year old, from single eyes. If you can beat them in your part of the State, I should like to see them, for I never have seen the like of them in this part of the country before.

And now for the "very small fibers." I visited Mr. W.'s place in the fall, and he dug up one of those pot plants to examine the roots; and behold, the roots were bare, the small fibers had disappeared, and Mr. W. expressed himself satisfied.

Yours truly, J. CRAINE.

*Lockport, N. Y., March 11th, 1863.*

[Your object seems to be to controvert our position, but in this you are not successful. It would seem, also, that you have not read carefully the remarks we appended to Mr. Walter's article. We stated distinctly that we would not buy the vines No. 1. If they have failed to grow well, they have only sustained

our position. What he described as hair-like fibers we supposed to be already dead, and our supposition turns out to be correct. That was our principal reason for saying that we would not buy such vines. Every position we took in those remarks we know to be correct. We have experimented with the roots of plants as no other man in this country has, and claim to know something about them. We stated, that in the sense evidently intended by Doctor No. 2, secondary roots do not die, and we repeat the remark. There is no doubt about it. The hair-like fibers described by Mr. Walter are mere abortions found in badly-managed pot-plants; they do not die; they are already dead. They do not come under our definition of secondary or fibrous roots, as you may learn by previous remarks of ours. The wood you sent was large and good. You may rest assured that the vines described in our "Hints" are the best that can be planted.—ED.]

MR. EDITOR:—I take this opportunity of soliciting a little information or advice. I am situated on a bleak, high prairie, my western boundary being nearly on the summit of the highest hill around here. Right on this highest ground, with an eastern declination, I intend planting a pear orchard; but first I want to raise a good living fence on the western side, for a screen and protection from the keen, biting winds of winter. Supposing that young Osage plants are not now obtainable, I have procured some Honey Locust seed, and also some seed of the Buckthorn, which I have in small boxes mixed with sand and buried in the soil, for the easier germination in the spring. I have no experience with either of these plants. I wish to know which you think preferable. Will the Honey Locust bear the shears well? Besides these, I have the Gray Willow (yearling) and Black Walnuts, three years old, both fast growing with me. How will it do to set either of those trees in the fence rows some four or five feet apart, and then pile in with the Honey Locust or the Buckthorn, six or eight inches apart? Will the shade of the Willow or the Walnuts, which I would let

grow up heavenward as fast as they will, be injurious? Inside of that row, which would be my fence and protection, I would plant my screen, say four or five feet from the outer row or fence. This I would have of evergreens. I can get good, well thickened up trees, of the American Arbor Vitæ, very cheap. Would it not be a good plant for the purpose? I have a lot of Red Cedar on my grounds; also a few Norway Spruce, Austrian Pines, White Pines, and several other sorts, but not enough of any one kind but the Red Cedar; and if I buy, I can get nothing so cheap as the American Arbor Vitæ. Which is the most vigorous growing, the Arbor Vitæ or the Red Cedar? The latter browns badly with me in winter, while the former is hurt but little. Now, Mr. Editor, I shall esteem it a favor if you give me some instruction as to how I can best, under these circumstances, procure the desired screenage and protection, what trees I had better use, what distance they should be set, etc. Is it best to set the orchard all of standards, or of standards and dwarfs mixed, and what distance do you think best? I find my trees and grape vines are injured a good deal from southerly and southwestern winds, in the growing season. Would not a screen on the south be good, too? Should I use evergreens there, or only deciduous trees? One question more, if I have not already given you too many. Which is the better early grape, the Hartford Prolific or the North America? If you will have the kindness to reply to these questions in an early number of your excellent paper, you will greatly oblige,

Yours respectfully,

WILLIAM FARE.

*Libertyville, Lake Co., Illinois.*

[The Honey Locust and Buckthorn both make excellent hedges. The first is most ornamental, but we think the last will grow best with you. You can safely use either. The Honey Locust bears the shears well. We would not use the Willow or the Black Walnut any where near an orchard. The roots of the Willow would prove a nuisance if the trees were allowed to grow up as you

propose, and the shade of the Walnut is decidedly bad. Substitute the Maple and the Norway Spruce, and you can carry out your idea effectively. The American Arbor Vitæ is a good plant for your purpose. The Red Cedar we do not think much of. The Norway is excellent. The Arbor Vitæ is a much more rapid grower than the Red Cedar. For a screen, we should plant (as you have the trees at hand) Maples, Spruces, and Pines, intermixed, about six feet apart; and for a hedge, the Arbor Vitæ, about two feet apart, so as to allow them to make a good-sized hedge. We do not mean two feet from the branches, but two feet from the trunks. We should set standards and dwarfs together in the orchard, placing the standards twenty feet apart, and the dwarfs between them, all in quincunx form. Let your trees branch low, and keep them well cultivated. A screen on the southwest of your vineyard would answer a good purpose. Make it of evergreens. The best early grape is the Creveling. The Hartford Prolific is better than the North America. We regret that your questions have not been sooner answered.—ED.]

PETER B. MEAD, ESQ.:—*Dear Sir*,—The Rose Bug appeared this year in vast numbers, and has been very destructive to fruits, fruit trees, and vines, especially to the Grape. They made their appearance about the 15th of June, destroying whole bunches by eating the blossoms. The late flowering kinds suffered the most, as the bugs increased wonderfully after the second day. We killed them by wholesale day by day, but still without any apparent diminution of numbers or quantity. It was not uncommon to collect a handful from a single bunch of grapes.

Last year my Catawba, Diana, and To-Kalon grapes were attacked with mildew and rot on the 20th of July, which I think was arrested by an application of one part sulphur and nineteen parts air-slaked lime, well mixed, and thrown on to the vines immediately. This season I thought best to anticipate the disease, and apply the remedy as a prophylactic; accordingly, I had an application

of sulphate of lime (gypsum) made to my Catawbas on the 23d of June. We had then been engaged for nearly a week in picking and killing Rose Bugs, averaging ten to twelve hundred every morning, from seventy-five vines, of which we kept an account.

After applying the gypsum freely to the leaves, fruit, and ground, on the following morning, we found none of the long-footed insects; the second day none, and the third day none. A few were seen flying, and when they alighted were uneasy, and did not remain. To be certain, I examined six rows of vines carefully, and found three Rose Bugs. I then went over again to be sure that I had missed none, and found one more, making four bugs on 188 vines. Now the question came up, May not the Rose Bugs have disappeared as suddenly as they came? but I found them in vast numbers on the cherry trees and rose bushes. A clever neighbor living half a mile distant, had informed me that he was infested with them a year ago, and I made him a visit to inquire if he had any to spare. "Yes," he replied, "here are a couple of quarts that I have just put an end to," holding up a tin vessel in which was soft soap dissolved in water for that purpose. But I said, "I want living bugs;" and sure enough, I found them on his vines in incredible numbers.

The Rose Bugs continue abundant up to the middle of July, but their time is now short. If my experiment is of any value, please make it known through the *HORTICULTURIST*, that all may reap the benefit.

It may be interesting to inquire where these myriads of insects come from, and what will be the end of them. Do they migrate? and if so, may we expect them to leave us altogether?

I may remark that, after the application of the sulphate of lime to my grapes, the fruit suddenly enlarged, and the vines showed great vigor and apparent healthiness.

I hope to escape the rot. We have had a period of wet weather followed by great heat, such as accompanied the mildew and rot last year. A friend remarked that the atmosphere was like that of a laundry.

I have great satisfaction in growing and training my vines this season according to your advice in your "Hints on Grape Culture," which I find saves a vast deal of labor, and in these times, that is an important consideration. Thus far I have managed to do all the tying, trimming, and pinching of two acres, with the assistance of a boy during the bug season. W. A. WOODWARD.

*Vail's Gate, Orange County, New York,*  
July 15, 1863.

[We are much obliged to you for your communication on the Rose Bug, much the greatest pest, in some localities, that the fruit grower has to contend with; for it spares nothing. Apples, Pears, Cherries, Plums, Grapes, etc., all fall a prey to it. It is so tenacious of life, that ordinary means have hitherto failed to destroy it; nothing but actually crushing the life out of it has proved effectual. Where neighborhoods combine to destroy it in this way, the evil may be subdued. If your remedy should prove efficacious, it would be an inestimable boon to the whole community. It is simple and cheap, and if not destructive to the Rose Bug, it is to the mildew when early applied, and it is also good for the vines; so that its application will in no case be a loss. We are disposed to think well of it. A thick coating of it on the leaves and fruit we should think would prove annoying to the Rose Bug; and if it did not kill them, might drive them elsewhere. Even the least immunity from this pest would be regarded as a blessing. We hope the sulphate will be tried, and duly reported on, by many of our readers.—Ed.]

MESSRS. MEAD & WOODWARD,—I am not sure that you answer questions, in your pages, in the manner of the *American Agriculturist*. If not, let this pass; but if you do, I should like to hear what you may say of the case described.

You may know that great difficulty has been experienced in making fruit trees, such as apples, pears, cherries, etc., grow in Minnesota. The failure is attributed to the cold, and, indeed, to a great variety of causes, not many of which seem to be entitled to much

respect, except that of cold, and the facts in relation to that are so singular as to lead me to suspect that the *severity* of the cold is not the cause, nor certainly its *duration*. For surely the winters here are neither so long nor so cold as those of several other places where these fruits flourish in perfection.

I am, indeed, a novice, and very green in horticulture, and as such I ask leave to make the following suggestion, and ask your opinion of it. I am already preparing to put it to the test the coming fall, and if it be worthless, I should like to cast it aside, and try something else.

My suggestion is this: The experiments hitherto made in Minnesota have been with trees and seed procured from a latitude where those fruits have a longer growing season than they have here; consequently, the young growth of the tree is caught by the frost and winter's cold before the wood is fully matured. Trees adapt themselves to the seasons of the latitude where they grow. In Southern Ohio, Indiana, and Illinois, they are like the corn of those sections, growing slowly and for a long time, and so proportionally further north. We know we can not raise the corn here which grows profitably in Middle Illinois. Why should we be able to produce their apple trees? If there be any force in this suggestion, we need fruit trees whose habit is to grow rapidly, like our grains, and mature fully before winter, or rather cold weather comes on. Will it not be necessary for us to select such trees, and those only, as are observed to possess this habit? or, in other words, to get our fruit trees from Vermont, or Maine, or, better, from Canada?

And as none of these fruits come true to seed, would not the most expeditious way of getting fruit trees that will live, be, to plant the seeds freely, and selecting such as appear to conform to the requirements of our season, cast the rest away?

What do you think of the suggestion? I do not expect you to answer me, except in a way to enrich your journal. JOSHUA SWEET.  
*Fort Ridgely, Minnesota.*

[We very gladly welcome you to our

correspondents' column. We cheerfully answer questions. The cold, no doubt, is an obstacle to the general success of fruit culture in Minnesota; but shelter is the great want of that country. Provide this, and select such kinds of trees as mature their wood early, and fruit will become abundant in Minnesota. In new countries, too, the soil is sometimes naturally so fertile as to produce a redundant growth in some kinds of fruit trees, and the wood fails to ripen. In such cases it is very generally winter killed. Your course of reasoning is sound. So far from advising you to abandon your proposed experiments, we would urge you to go on with them. Very few are willing, or have the courage, to embark upon a course of experiments so well calculated to benefit the world. You may have much or little success; but if you originate only one new fruit perfectly adapted to your climate, you will have made the whole world your debtor. Your seed should not be gathered at random, but carefully selected with reference to the object you have in view. You no doubt understand that many years will be required to obtain results from experiments like these; but you will not be discouraged when you reflect upon what has been done in Ohio, Illinois, and elsewhere. You should not, however, confine yourself to planting seed alone. Orchard planting should form a part of your experiments. Prepare the ground thoroughly, provide abundant shelter from the prevailing cold winds, and select the best trees you can find. If you get them from the East, we would advise you to plant in the spring rather than the fall, for the simple reason that they would probably be lifted before the wood was thoroughly matured. It may be of some assistance to you if we add a short list of kinds that we think it would be safe for you to plant. Of Apples, we may mention American Summer Pearmain, Red Astrachan, Early Harvest, Large Yellow Bough, Fameuse, Graevenstein, Ben Davis, Rambo, Swaar, Rawles' Janet, Peck's Pleasant, Danver's Winter Sweet. Of Pears, Bartlett, Belle Lucrative, Dearborn's Seedling, Flemish Beauty, Lawrence, Sheldon, Seckel, Buffam, Beurré Diel,

Easter Beurré, Louise Bonne de Jersey, Urbaniste. Of Cherries, Belle de Choisy, Belle Magnifique, Late Duke, May Duke, Reine Hortense, Kentish. Other kinds we fear you will not be able to grow, but you might try Black Eagle, Black Tartarian, and Coe's Transparent. For Peaches you can rely much on your seedlings. They fruit young, and if the pits have been well selected, you will be quite sure to have some good kinds. Still, you might plant Cooledge's Favorite, Crawford's Early, Crawford's Late, Early York, and Hale's Early, the last being a new peach which has impressed us very favorably, and which we think is better for you than many others. Grow your Peach trees low, and throw some brush over them on the approach of winter. Of Plums, the following will probably be best for your purpose: Coe's Golden Drop, Huling's Superb, Imperial Gage, Green Gage, McLaughlin, Washington. Of Grapes, Delaware, Creveling, Concord, which may be laid down and covered during the winter. Of Strawberries, Hovey, Longworth's Prolific, Wilson, and Downer are among the hardiest. Cover them with coarse litter before the ground freezes hard, but do not make the covering thick. This, we think, will do for the present. We have selected for you such kinds as have done very well under conditions similar to yours. You may not succeed with all, but this can only be determined by actual trial. We shall be glad to know that there are many others who are willing to venture something for fruit culture in Minnesota. If those who have already made trial would furnish lists of such kinds as have done well, they would do the public a good service.—Ed.]

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MR. MEAD:—Please tell us, in your next number, the best direction to run the rows in the vineyard. RUFUS CONANT, JR.

*Provincetown, Mass., July 9, 1863.*

[We think we have already done this in our "Hints." On level ground, the rows should run east and west. On hillsides the rows must run at right angles with the slope of the hill.—Ed.]

P. B. MEAD, Esq.:—*Dear Sir*,—We are all very much interested in the correspondence monthly published by you in your valuable periodical. I wish to add my mite to the good cause. This county is known over the state, and, in fact, over the entire West, as *the Nursery County* of the state. We have five large nurseries in this place. The largest, covering over 240 acres, is owned by F. K. Phoenix. The next by Overman and Munn, covering about 160 acres. The other three are smaller, but being constantly enlarged. This season Phoenix has sold over \$150,000 worth of fruit trees. Grapes are largely cultivated in this place. Several quite large vineyards have been planted in the last two years. Some three or four smaller ones have been in being for the last four years. The largest of these is one owned by Dr. H. Schroder, containing about five acres. Grapes look well this year. Small fruits are abundant, but hardly as much so as last year. Inclosed you will find a short history and description of a new and (we think) very valuable seedling strawberry, originated by the above-mentioned Dr. Schroder. The Dr. will send you plants this fall.

Respectfully yours, W. H. S.  
Bloomington, McLean County, Illinois,  
June 17, 1863.

*The "Old John Brown," Dr. Schroder's New Seedling Strawberry.*—This new and unequalled variety of the Strawberry is the result of a cross between the "Wilson's Albany" and the old "Chilian." The seeds were planted by Dr. H. Schroder in 1856. Out of several hundred plants, this variety was selected and named by the Doctor in 1858. That fall he had twenty-seven plants. They were allowed to fruit but little in 1859. In the fall of 1860 he planted out a little over 500 plants. In 1861, '2, and this year, he had an immense crop of the finest berries ever seen in these parts. The flowers are perfect, and appear here at least ten days before those of the "Wilson." Last year they were fully ripe on the 17th of May, and this year on the 20th of May. Since that time up to the time of this writing (June

17th,) he has gathered several bushels daily, and the promise is yet good for fruit for at least a week or ten days. The plants are wonderfully prolific, and the berries immensely large, many being from four and a half to five and a half inches in circumference. Fruit, broadly conic, pointed. Color, light crimson. Flesh tender, sweetish, but not as much so as the Hovey as raised here. Flavor, far superior to any other variety known here. W. H. S.

[We deem our correspondence by no means the least valuable part of the magazine, and we are always glad to know that it is read and appreciated. Those who pass it by lose much that is useful and entertaining. We were aware that a considerable nursery business was done in your county, but its extent, as you present it, exceeds all that we had imagined. But you have an immense and beautiful country to make fruitful, and the nursery business is not likely to increase too fast for many years yet, provided the right kind of stock is grown. We are glad to know that you are planting grapes largely. You will find them profitable for meat as well as drink. We hope Dr. Schroder will not forget to send us the Strawberry plants. Your description leads us to conclude that it has much merit, and we are anxious to give it a place in our trial bed. Is the Dr. sure it is a cross between the Wilson and the Chilian?—Ed.]

P. B. MEAD:—In constructing hot water apparatus for heating green-houses, where the tank is used in place of pipe, could the tank be constructed of cement, or would the hot water have a tendency to injure it so as to render it incapable of retaining water, as in ordinary cisterns? A. FURNAS.

Clayton, Hendricks Co., Ind.

[A tank may be constructed of cement without any fear of the hot water injuring it. A good plan is to build the tank of brick laid on blue stone, the brick to be laid in good water cement, and then the whole tank washed with cement, inside and out. The

brick may be laid on thick plank instead of blue stone, but the latter is best. A good coating of linseed oil laid on the cement will be certain to make the tank all tight; but it is a pretty expensive article to use in these times.—Ed.]

MR. EDITOR:—I see an article in a late number of the HORTICULTURIST, the writer of which takes the ground that it is injurious to an orchard to plow the ground after the trees are planted. This idea is so at variance with our western notions of orchard culture, that I would like some explanation. My own rule has been to put the plow in as deep as I could, and never mind if it did break some of the roots of the trees; they seem to grow all the better for it. If it injures trees to plow among their roots, is it not bad practice to plow at all when there is any crop in the ground? We plow corn when the roots interlace across the rows, and the more we plow it the faster it grows, and the bigger the ears get. Is it a matter of opinion merely, or a difference of soil and climate, or what is the matter? H.

*Marshall Co., Ill.*

[It is true that a correspondent took the ground you name. Old, decaying orchards have been plowed at our suggestion in many different places, and always beneficially; hence we can not appreciate the fears of those who argue that much damage will be the result of plowing an orchard. Like you, we can not perceive why it should injure a tree to cultivate it any more than a crop of corn. We try to treat our trees and corn alike, and are benefited in both just in proportion as we do it faithfully. Others are also, and we think all would be.—Ed.]

MR. EDITOR:—As the season is approaching for planting new Strawberry beds, perhaps you will favor me and other readers of

your magazine with a select list of varieties for family use. I wish to extend the season as much as possible by planting both early and late varieties. My soil is a sandy loam. Is such a favorable one? What preparation shall I give it? I can get an abundance of leaf mould, but other manure is a scarce article. Which do you consider the best, fall or spring planting? H. W. F.

[We are glad to help you with one of our favorite plants. We will answer your questions as they are asked. For family use you should plant nothing that is not very good. A few choice kinds will yield you more satisfaction than many indifferent ones. For amusement you can grow a great many more. The following you can buy at reasonable prices, and they are all very good family berries. We purposely omit some of the most recent. Jenny Lind, Boston Pine, Hooker's Seedling, Burr's New Pine, Ladies' Pine, La Constante, Hovey's Seedling, Triomphe de Gand, Longworth's Prolific, Bonté de St. Julien. A sandy loam is an excellent soil to grow the strawberry in. Spade it up two feet deep, and mix with it an abundance of leaf mould; nothing is better for the strawberry. A top dressing of unleached wood ashes will be good. If you have none, get some potash sweepings from the inspector's office. We consider early fall planting best. Your ground should be prepared now. Let the weeds get just out of the seed leaf, and then cut them off with a *pushing* hoe. Run it about an inch beneath the surface. This will save you much trouble in subsequent weeding. If your ground is in grass, turn the sod well under, and kill all the larvæ of the May beetle that you see. In old sod grounds these larvæ are very abundant, and will destroy many of your plants. The beds are to be planted after the weeding. Call for any other information you may want.—Ed.]



THE

# HORTICULTURIST.

VOL. XVIII.....SEPTEMBER, 1863.....NO. CCVII.

## Hints on Grape Culture.—XXIX.

WE should have stated, in our last article, that the canes in *Fig. 2* may be allowed to bear a bunch of fruit each. The Delaware, when showing good condition, may be allowed to carry two bunches each. In some of the rank-growing varieties, however, the fruit is sometimes small and indifferent the second year, especially where the vines are growing in a rich soil. This is owing to the rapid flow of the sap to the extremities.

We will now take up the treatment of the vine during the third season. The first operation consists in bending the arms, which should be done in reversed order, as shown in *Fig. 1*. The arms may be from twelve to eighteen inches long when bent, and the stakes accordingly set that distance apart, one on each side, as seen in the figure at *s*. The best time to bend the arms is just as the buds begin to swell, as at that time the canes will bend easier, in consequence of the movement of the sap. At the point *i*, where the two arms cross each other, it will be well to tie them until they become set. The arms having been bent, it will be seen what was meant by having the buds on the upper side. The ends of the arms must be tied to the stakes *s*, and in order that every thing may be as neat as pos-

sible, the stakes should be set so that the buds *d* and *e* will come in front of them. All the buds at *b*, *c*, &c., have been rubbed

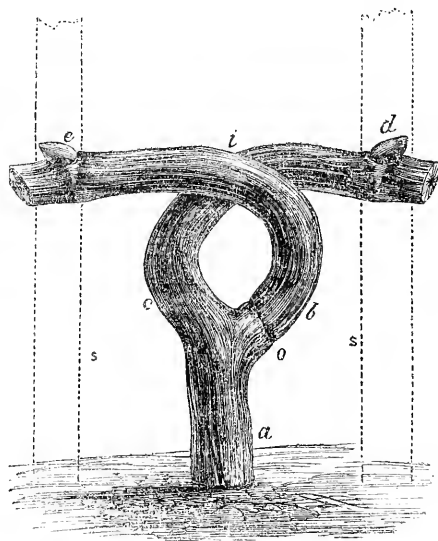


FIG. 1.

out, and we have only two left, *d* and *e*, which correspond to the buds *d*, *d*, in *Fig. 2* of last month. The canes act as "safety valves" in this system, and none are there-

fore specially provided. The canes proceeding from the buds *d* and *e* are to be trained to the stakes, *s*. The laterals are to be pinched in as heretofore directed. If the vines are in good condition, the canes will grow many feet beyond the top of the stakes, and probably prove a little troublesome; but this trouble becomes less as the vines acquire age. When the canes have grown about a foot above the top of the stakes, pinch out the extreme end, which will cause a brief check, and start the laterals into increased growth. The two top laterals may now have a little more freedom. At each pinching of these two laterals, leave three leaves instead of one, and let the laterals grow pendently, as we have now secured a good cane to the top of the stakes, and need no bearing wood beyond that. If the canes are securely tied at the ends of the stakes, the growth above them may be secured in any convenient manner. Unless the vines are much exposed to high winds, the growth above the stakes may the third year be left mostly to itself, subject, however, to the pinching above noted. About the first week

in September, the laterals may be pinched for the last time. The vines may then be left to ripen their wood. If there should, in consequence of a rank growth, be any reason to suppose that the canes, in any particular instance, will not ripen before frost, the ends may, about the second week in September, be broken about a foot above the top of the stakes; they must not be broken *off*, but only *down*, and left to hang. This will hasten the ripening of the wood.

A few words may be added about the fruit this year. Both canes may be allowed to carry all the fruit they will set, but the removal of the small bunches will make the large ones all the larger, if done in good season, and this is as soon as they can be seen. If Rose Bugs, however, should happen to be numerous, and you do not pay special attention to them, the thinning out had better be deferred a while, as the Rose Bug generally thins out without regard to the size of the bunch.

The pruning at the end of the third season, and the treatment during the fourth year, we leave till our next.

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## TRANSPLANTING OLD PEAR TREES.

BY C., PROVINCETOWN, MASS.

MR. MEAD:—*Dear Sir*,—I wish to tell you of the good success I have had with some *Old Pear Trees* that I removed from Melrose, Mass., to this place, some sixty miles by water, and planted out in eight inches of leaf mould; also some coal ashes and lime rubbish mixed, and mulched with salt hay.

They were taken from a very rich garden, rather low and damp, though not wet, and of late years had been shaded somewhat by apple trees.

The tops had from one third to one half died; so when the dead wood was cut out they stood about five feet high. They are Duchesse d'Angoulême, Louis Bonne de Jersey, Beurré Diel, and Bartlett, all on quince roots. One unknown variety—may be Beurré

Hardy—left the quince roots in the ground. Three finger-like roots from the pear stock, about nine inches in length, remained, but the tree has grown equally as well as the others, which have all made a surprising growth, this being the third year since their change of location. They were twelve years old when removed. The Bartlett had not gained in height more than six inches during the twelve years; half an inch a year! I bought it from a tree pedler when a boy at home, and it was less than three feet high. It bore every year, and this fact, with its standing by a heavy grass sod, checked the effort to get higher. Last year I cut seventy feet of wood from it, and this year it has grown out of the knowledge of its oldest friends. It

has not been manured, save some liquid manure poured between the rows three feet from the roots last winter.

One Louis Bonne is a curiosity for Cape Cod. It set between five and six hundred pears. I have taken off a hundred or more, and the rest, some three or four hundred, are growing finely. The tree is some six and a half feet high. The Duchesse is making a large growth, blossomed very full, but has only one dozen pears.

The trees have a good deal surprised and pleased me. They were given to me, as they were dying, and I took them as an experi-

ment. I now value them higher than the most vigorous young trees I have ever bought. Have you a similar experience?

[We have had no little experience in transplanting large trees, and regard your success as very gratifying indeed. The experiment would have possessed greater interest if the trees had been on pear stock instead of quince, since trees on quince may be transplanted with the greater success. Transplanting trees twelve years old, however, is not done every day with such decided success as you met with.—Ed.]

## COUNTRY HOMES.

BY MEAD & WOODWARD, ARCHITECTS, ETC., 37 PARK ROW, N. Y.

WE give our readers another of the proposed series of designs for economical suburban and country homes. In this design (Fig. 31) we have sought to confer on the interior arrangement a certain degree of refinement often demanded as an essential requirement in a country home by persons accustomed to the easy elegances of city life, but not always obtained at a reasonable outlay and sacrifice.

The amount of accommodation and the general arrangement of rooms will be readily seen by referring to Figs. 32, 33, and 34—basement and first and second story plans.

The rooms are well connected, and we have endeavored to make them good in their relative positions, easy communication, and that degree of privacy maintained between the apartments for common use and those exclusively for pleasure that is found so desirable in houses of this type. The order in which these rooms are designated for use may also be changed to suit the wishes of the occupants, without lessening their comforts or appropriateness of position. The small chamber over the vestibule, designed for a servant, may be used for an "own room" by one of the family, and the store room in the basement be appropriated to a servant's use. The library on the first

floor might also be devoted to some other purpose, perhaps for a sleeping room, should more be needed; and other similar changes might be made.

The basement has a clear story of 8 feet, square ceilings, ventilated by proper air-ducts, both overhead and under the basement floor, thus preventing moisture and its effects upon the health of the inmates. The first story is designed to be 10 feet in the clear, and square ceilings; the second story, 9 feet in the clear throughout the middle portion of the entire house, leaving a projection of roof of about 3 feet on either flank of the building, starting from the floor at a height of six feet, and projecting inwardly at an angle of 60 degrees. This form is much used in upper stories of houses of this class, and admits of greater economy in the construction, and aids in the more perfect formation of the cottage character.

The general finish is designed to be plain, but effective. In the exterior we have sought, by a judicious use of the methods of proportion, to give this design a greater variety in the plan and elevation, and hence have secured that easy and harmonious disposition of detail and repose of parts that place it purposely a step in advance of preceding designs. The house is designed

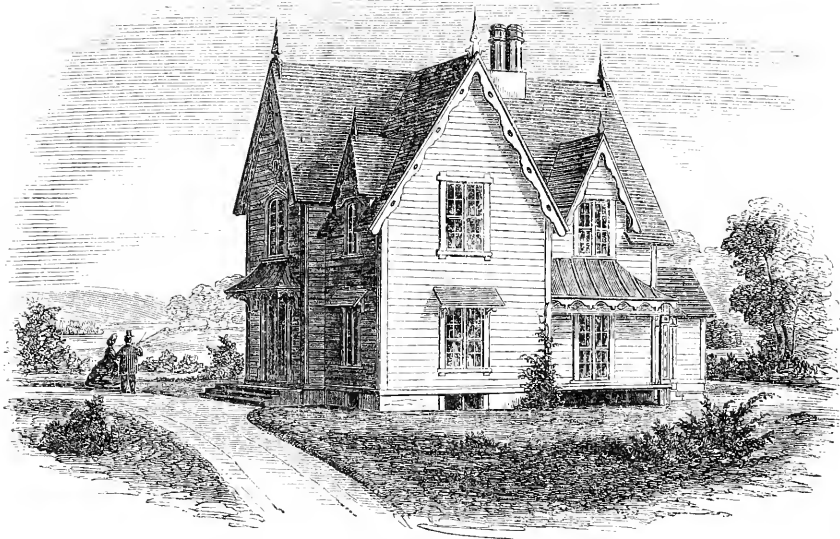


FIG. 31.—Perspective.

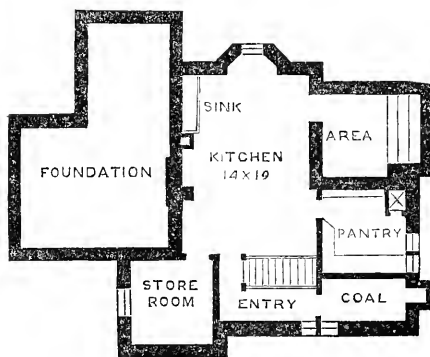


FIG. 32.—Basement Plan.

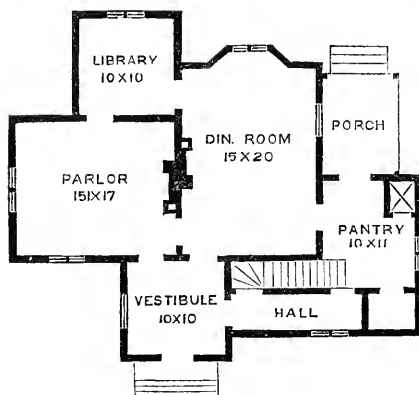


FIG. 33.—First Floor.

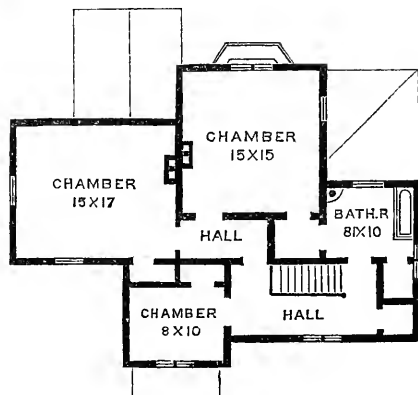


FIG. 34.—Second Floor.

to be built of wood, with stone foundations, in a substantial and workmanlike manner, with a balloon or plank frame. Of the style and peculiar characteristics of this type of cottage we propose speaking at some length by-and-by. The cost of this

portable protection and convenience, as well or even better than the most costly structures. A horse needs a dry, well-ventilated apartment, and enjoys fresh air, daylight, and sunlight as well as human beings. Unless these very inexpensive wants are

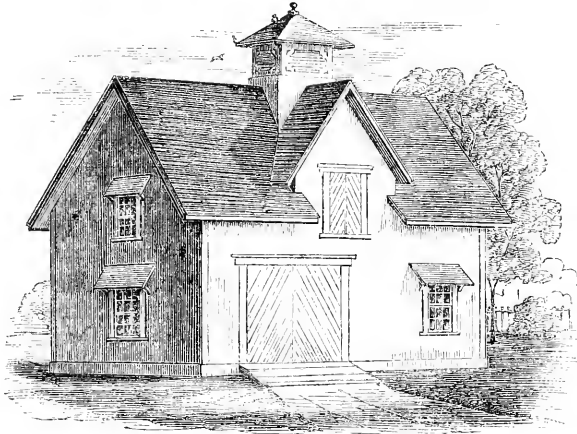


FIG. 35.—Stable.

house, under a careful superintendence, would probably be \$3,300, or \$3,600, with a spacious verandah extended across the front, over the vestibule door, and parlor and passage windows. We offer this as a suggestion of some importance in an exposed situation.

Fig. 35 is a design for a cottage stable, with stalls for two horses, and the necessary carriage room and other conveniences. This design, in its exterior, is somewhat similar to those shown in the July and August numbers, (Figs. 28 and 29,) and presents as great a degree of variety in the combinations of form and shadow as the price will admit of. It answers the purposes of com-

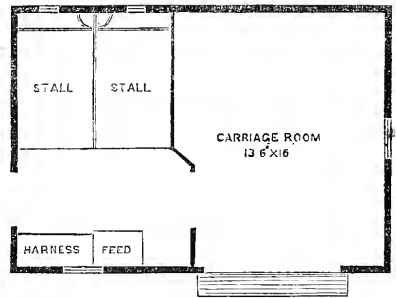


FIG. 35.—Stable Plan.

provided, no compensation is afforded by elaborate detail and workmanship.

## THE YEDDO GRAPE.

BY SAMUEL B. PARSONS, FLUSHING, L. I.

THERE has been so much interest felt in this Grape, and its introduction to this country has been so much desired, that a de-

scription of its habit and growth will doubtless interest your readers. The first account we have of it is from the pen of Robert

Fortune, the well-known Chinese traveler, and was published in the *Gardener's Chronicle* for April 27, 1861. He says:

"The Vine of this district, which we may as well name at once the 'Yeddo Vine,' produces a fruit of great excellence. The bunches are medium sized, the berries are of a brownish color, thin skinned, and *the flavor is all that can be desired*. This grape may be valued in England, where we have so many fine kinds, and *most certainly will be highly prized in the United States of America*. A few years ago I was traveling from Malta to Grand Cairo, in company with Wm. C. Bryant, the celebrated American poet, and a genuine lover of horticultural pursuits. This gentleman informed me that, owing to some cause, our European vines did not succeed much on the other side of the Atlantic, and suggested the importance of introducing varieties from China, where the climate, as regards extremes of heat and cold, is much like that of the United States. I have never met with what I consider a really good variety of grape, and therefore have not been able to act on Mr. Bryant's suggestion. At last, however, we have a subject for the experiment, and I urged its importance on Dr. Hall, who is an American citizen, and who has already introduced a number of plants to his country from China. He enters warmly into the matter, and no doubt will accomplish the object in view. I therefore conclude this by giving notice to your readers to *look out for the arrival of the 'YEDDO VINE.'*

"R. FORTUNE."

(The Italics are our own.)

Having seen this article, and desiring also other Japan plants, we wrote Minister Harris, who handed our letter to Dr. Hall, then in Japan. The result was that, in the spring of 1862, Dr. Hall walked into our office, and proposed to place in our hands a large variety of Japan plants. Among them was this

"Yeddo Vine." We at once grafted it upon a strong native vine, and planted it in a good soil; during the last winter it was covered with straw, and up to this time its growth is very remarkable, and scarcely surpassed by any of the native sorts. The main stem is as thick as a man's finger, and from it proceed four strong branches, seven and eight feet long. By autumn they will probably be twelve or fifteen feet. The leaves resemble those of the Delaware, while the stem is unlike any other grape known. The vine will be left entirely exposed the coming winter. It was too small to be exposed the past winter. There is every reason to suppose it will be perfectly hardy, because nearly all the plants which have hitherto been introduced from Japan have proved hardy in our climate.

The interest now felt every where in grape culture gives additional importance to the introduction of this grape; and, should it prove all we hope, Dr. Hall will have rendered a great service to his country.

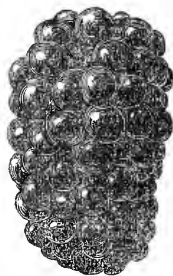
[This Yeddo Grape is the same one alluded to by Mr. Hogg, in his letter from Japan, and which he pronounces to be a good grape, and expresses the belief that it will prove to be hardy in this climate. We shall watch it with much interest. Please to hurry our vine along, Friend Parsons. Mr. Fortune was perfectly right in designating Mr. Bryant as a genuine lover of horticulture. He is about as learned in pomology as any of us, and possesses an exceedingly nice judgment. We must, on the whole, regard Mr. Bryant as having been instrumental in introducing this grape; and we therefore suggest that the Messrs. Parsons present him the first vine that is sent out. It would be a graceful and well-deserved compliment. We hope the vine has been propagated, and will soon be given to the public.—Ed.]

## A NEW BLACKBERRY.

BY THE EDITOR.

WE are indebted to Mr. E. Williams, of West Bloomfield, N. J., for a basket of the fruit of a new Blackberry. We find it to possess such good qualities, that we give a portrait of it. We selected for the purpose a medium sized berry; the size, however, is very uniform. The outline of the fruit, it will be seen, is somewhat like that of the Dorchester, but not so regular. It might very well be described as a berry between the Dorchester and New Rochelle. The berry is longer than the latter, but more irregular than the former. The pips are as large as in the latter, with all the sweetness of the former. It has a delicious flavor. The pips seem to ripen very uniformly, and the seeds are very small. It is very productive, if we may judge from the bearing shoots we saw. On the whole, we regard it as a large, handsome, and high flavored fruit. We are not informed

where it originated. It is probably one of those "chance" varieties that may sometimes be found growing wild. If more attention



SEEDLING BLACKBERRY.

were paid to them, our list of blackberries might be very much improved. The variety under consideration is one that ought to be propagated.

## PLANT HOUSES.—IV.

BY THE EDITOR.

WE have selected two examples of Plant Houses for illustration this month, the first being a *Forcing and Propagating House* of somewhat peculiar construction. Its history is briefly as follows: More than two years since, B. C. Townsend, Esq., of Bay Ridge, already known to our readers as an eminent amateur, came to us, and asked if we could not plan him some kind of a hot-bed in which he could handle his plants without exposing himself to the weather, and his plants to the cold. The idea being new to us, and believing that we could do any thing possible in that way, we took time to consider. The result was the house we are about to describe, which we have always since regarded as a happy inspiration. *Fig. 1* is a perspective view. At the east end there is an ante-room and an old house not shown in this view. It

will be observed that the roof is quite flat, being only 28 degrees. This is greatly at variance with popular notions on the subject; but numberless experiments have convinced us that the flat roof, in our climate at least, has most decided advantages over the usual steep one, not only as affecting the growth of the plants, but the labor of taking care of them. But in this case we had a special object in view, to the success of which the flat roof was indispensable, if we could place any reliance on former experiments. It has proved an entire success. The house has a double pitch, and runs east and west, instead of north and south. The simple reason of thus placing it was, to use the north side for propagating plants, and the south side for forcing early vegetables, strawberries, &c. A portion of the roof on the south side

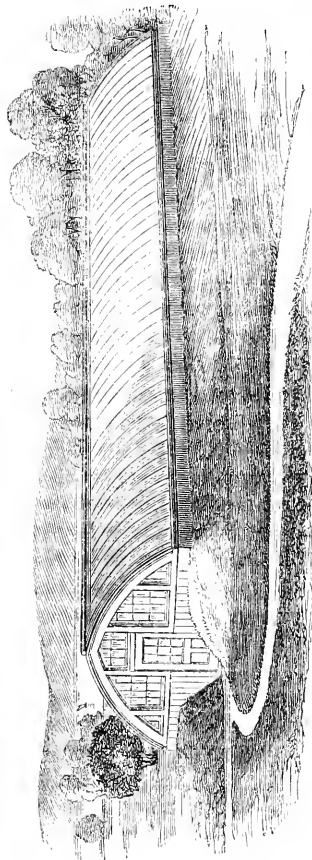


FIG. 1.—Perspective View.

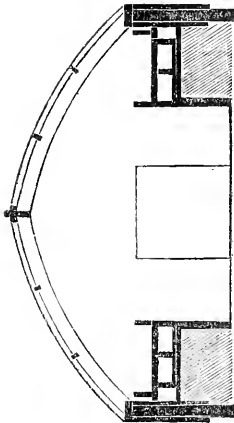


FIG. 2.—Section.

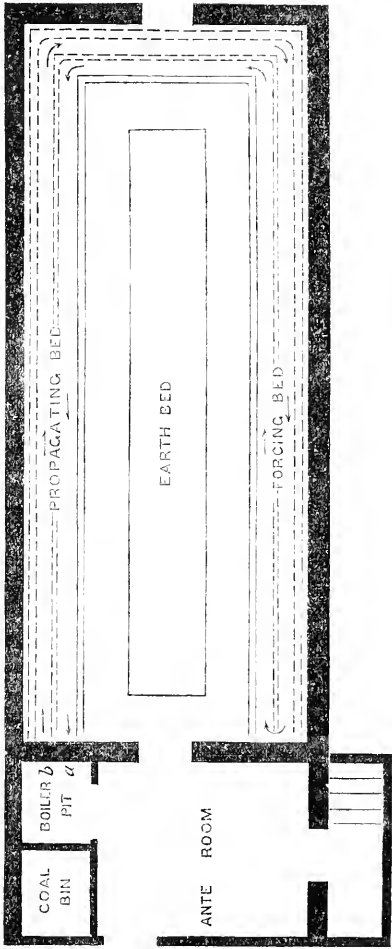


FIG. 3.—Ground Plan.



can be lifted up in large sections, the design being to harden off the plants in the spring; but there are other ways of doing this.

The house having been built in winter, a brick wall could not be used; in addition to this, it was not intended as a permanent structure, the intention being to remove it; the wall was consequently built of wood. Locust posts were used, the boards being nailed to both sides, and a foot piece placed at the bottom to prevent moisture from rising between. The boards were painted with coal tar. The wall is as substantial as a wooden one can be, and will last many years. The house is 41 by 16 feet, and is heated by a hot water tank, made as follows: brick piers were built three feet apart, on which were laid blue stone flags two feet wide and six feet long. The sides and diaphragms were built of brick laid in cement. The inside of the tank was cemented, and then coated with linseed oil. It is perfectly tight; in the words of Mr. Townsend, "it does not leak a drop." It runs around the house, and the water is heated by one of Hitchings' small boilers. On the top of the tank are placed the propagating and forcing beds, as shown in *Fig. 2*. The bottom of these beds is arranged in several different ways, to afford different degrees of bottom heat, which has proved to be uniform and constant. The evaporation from the tank amounts to about one gallon a month; less than in an iron pipe. This tank is an admirable piece of work, and reflects great credit on the mason who built it. *Fig. 3* is the ground plan.

The north side of the house is used for propagating plants, and its capacity is equal to the supply of the whole State of New York. There is no kind of plant that may not be readily propagated in this bed. The conditions of success in propagating plants consist in a strong bottom heat, and a low outside temperature. As the south side of this house is used for forcing plants by bottom heat, the above conditions are obtained by sliding sashes set on the outside edge of the propagating bed, and reaching to the lower purlin, thus inclosing the bed alone, and shutting it

off from the warm air of the house. The arrangement answers the purpose admirably.

In the center of the house is a large bed of earth, which can be used for forcing grapes, tomatoes, &c., growing pines, and other plants. The beds on the south side, which have a good bottom heat, are used for forcing strawberries, cucumbers, lettuce, &c., and raising the usual hot-bed plants for pricking out of doors. The compartments between the piers, under the tank, are used as mushroom beds, and for forcing sea-kale, etc., in winter. These purposes are accomplished in a very satisfactory manner.

All the tank, except about five feet, is covered with beds, and the air of the house receives no heat except from these five feet and the sides of the tank; and this is found to be enough for ordinary purposes; but in the coldest weather, when the thermometer outside goes down to zero and below, some additional heat becomes desirable. This, fortunately, is a want that can be easily supplied. The ventilation is mainly done by the sashes over the doors at each end of the house, there being no ventilators in the top.

It is in this house that Mr. Townsend has conducted a series of the most interesting experiments. He called it at first his "experimental," but the name was soon changed to "the little gem;" and a gem it is for all practical purposes. It is not entirely free from faults, but they are few, and of such a nature as to be easily remedied. We consider it fortunate that we had to plan this house for a man like Mr. Townsend. Instead of suggesting a hundred or more alterations, all for the worse, he left the matter entirely to our own judgment, and did nothing but co-operate with us, and see that our plan was faithfully carried out. We have built a number of them since, and all have answered the purpose; but if we had done nothing for horticulture but plan that "little gem," we should be content. For a person of moderate means, or who wants only one house, and who wants bedding plants, early vegetables, forced fruits, &c., it is the house above all others for him. It is the kind of house, too, for nurserymen who propagate it

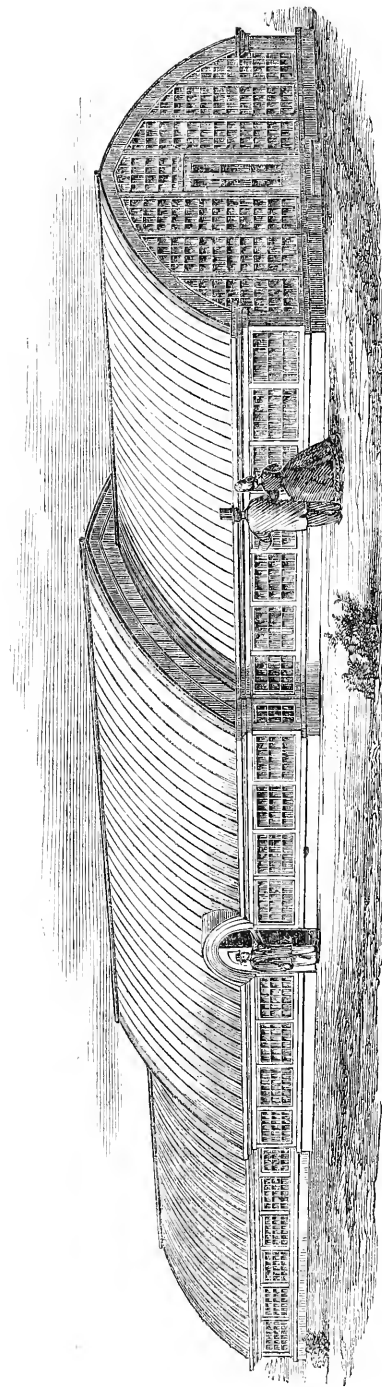


FIG. 4.—Perspective View.

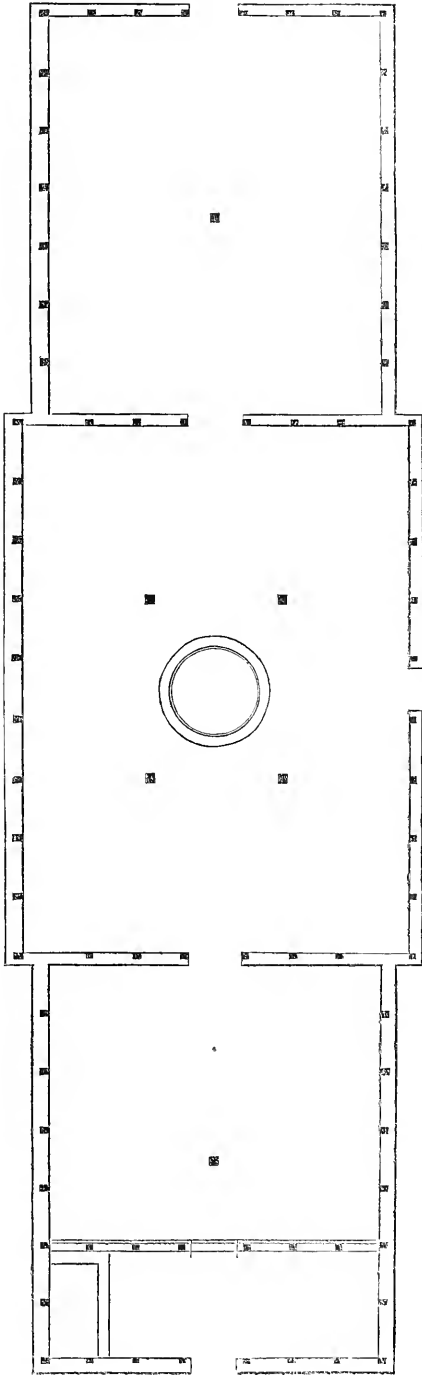


FIG. 5.—Ground Plan.

largely, the peculiar arrangement of the tank affording them the various degrees of bottom heat they require. One of the chief merits of the "little gem" is the rapidity with which it multiplies plants, including those usually considered hard to strike. If confined to one house, it is the kind that we should choose above all others.

Our second example is a house of quite a different description. *Fig. 4* gives a perspective view of it. It consists of four compartments under one roof, as seen in the ground plan, *Fig. 5*. It is 100 feet long; the middle section is 28 feet wide, and the end sections 24 feet wide. In the perspective the south end and west side are seen. The foundation consists of a hollow brick wall three feet high, two feet being sunk in the ground. The floor of the house will be filled in to within two inches of the sill.

The south section is to be used as a hot grapery, heated by four pipes. The border will be entirely inside the house. The middle section is to be used as a plant house; chiefly for plants in bloom, being, in fact, a kind of conservatory. The north section is divided into two compartments by a glass partition, one to be used as a hot house, and

the other, quite small, as a potting room, furnace pit, &c. The roof over the potting room might be boarded, but it is to be of glass, to preserve the beauty and uniformity of the roof. The best place for the furnace pit, in a house like this, would be entirely outside of the house.

It is designed to have a fountain in the middle section or plant house. This is always a pretty feature where it can be introduced. The addition of water plants, and a few golden carp, will make it interesting as well as pretty.

It will be noticed that the house is quite plain, depending for its beauty on its harmony of proportion and parts; yet we think most persons will consider it a handsome structure. A house may be ornamental without being handsome; this is handsome without being ornamental. The first and chief object of such structures should be to design them so as to insure the life and health of the plants to be grown in them; nothing whatever should be added that will interfere with this. A certain amount of ornament may be added without detriment to the plants, but it is too commonly overdone, to the injury of the house and the owner's pocket.



## A CHEAP GRAPE TRELLIS.

BY C., PROVINCETOWN, MASS.

MR. MEAD,—I have a Grape Trellis that I like better than any that I have seen a description of; better than yours, or Mr. Fuller's, or Mr. Knox's. It is substantial, does not get out of place, and is rustic in appearance. It is made of five or six inch cedar posts, eight feet long, set six feet apart, with spruce poles fifteen or sixteen feet long, nailed on to the posts a foot a part, running the whole length. The posts cost eight and ten cents each, and the poles three dollars a hundred here. I have used this kind of trellis for a few years past, and like it better than wire. Laths can be nailed across the poles perpendicularly to tie the growing shoots, if any one should wish,

although I do not use them, but loop up the first growth according to instructions in your "Hints." I find, in carrying out your system of training, that I shall have to nail one of the long poles to each post for the "safety valves" to climb on. My Union Villages are very aspiring. How high would they probably go if kept properly tied?

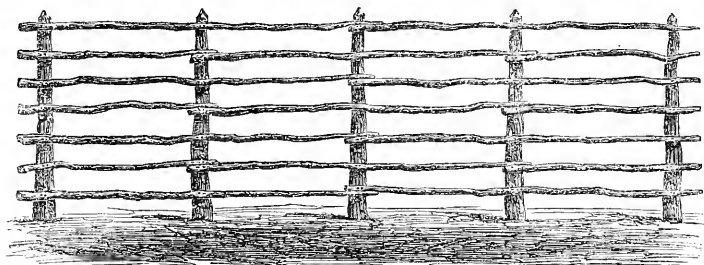
I have an Alvey, Lincoln, Anna, and Cuyuhoga that are growing well. Are they good grapes, and adapted to Massachusetts or not? Allen's Hybrid is a nice eating grape. Does it do well with you out of doors?

Would you recommend in a light soil to train the vine to single arms six feet long on

a low trellis three feet high, with two or three unchecked shoots carried up six or eight feet, near the trunk of the vine?

I have some Hartford, Concord, and Union

little freedom to grow, to keep every thing working nicely. You can pinch these two laterals to three leaves at each pinching. This is only a temporary expedient. There is no



CHEAP GRAPE-VINE TRELLIS.

Village vines set three feet apart, two years old, on a trellis six feet high; will it do to keep them in so small a space, double arms three feet each?

[We are pleased with your trellis, and have made a "portrait" from your description. The trellis will be durable, and very cheap where the posts and poles can be bought at the prices you name; and we have no doubt that in some places they can be bought for even less. The "safety valves" will for a time grow somewhat rampantly, but as the vines get older and fill up the soil, this redundancy will grow less, and the "safety valves" become quite manageable. Your soil is good for the grape, or your vines would not grow so strong. You can give the safety valves a slight check by simply twisting them about a foot from the ends, and letting the ends hang down. The sap will flow slowly through the bruised parts; but the two uppermost laterals must now have a

saying how high your Union Villages would grow if not put under restraint; but they will certainly all grow to wood if stimulated in the least. Do not give the Union Village even so much as a "smell" of your liquid manure. The grapes you name are all good, but they are not adapted to Massachusetts. Allen's Hybrid is, as you say, a very nice grape. It does finely with us out of doors, and during this bad season for the grape shows an immunity from mildew enjoyed by few other kinds. We would not recommend you to train your vines to a single arm six feet long. Two short arms are much better. If your Hartfords, &c., are set three feet apart *each way*, it is too close for such rank-growing vines. If the rows are six feet or so apart, they can remain. If you want to thin out, remove the Union Village, for it will never give you much satisfaction in your climate.—Ed.]

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### V A R I E G A T E D F R E E P E A C H .

BY THE EDITOR.

WE have lately received from Mr. Pullen, of Hightstown, N. J., another collection of peaches, for which he will please accept our thanks. Among them were several quite new to us, and, we suppose, new to most of our readers. We have prepared portraits of these,

and present one of them this month. Others will be given hereafter. The one herewith given comes to us under the name of Variegated Free. We purposed writing to Mr. Pullen for particulars concerning the tree, productiveness, &c., but could not do so in

season for the present number. We therefore append a description of the fruit.

*Size*, large, nine inches and a quarter in

circumference. *Flesh*, yellow, moderately juicy, sweet, and pleasant flavored. *Pit*, large, bedded in red flesh. *Quality*, very good.

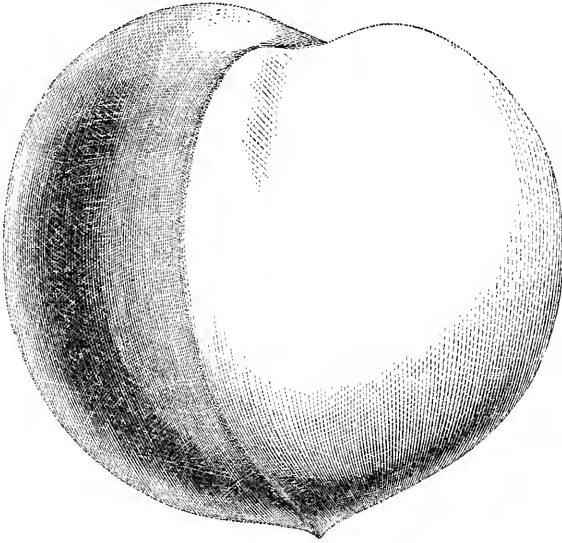


FIG. 1.—Variegated Free Peach.

circumference and two and seven eighths in diameter ; weight, eight ounces. *Form*, roundish, sunken at top, and a little largest on one

*Fig. 1* is a perspective view. *Fig. 2* is a sectional view. This is a large and beautiful peach, and we should feel obliged to Mr. Pul-

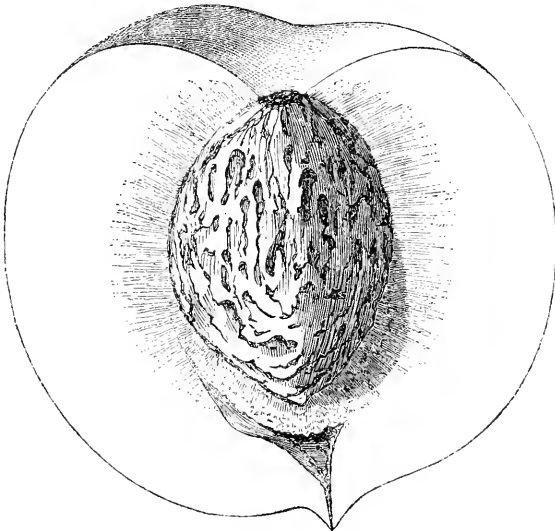


FIG. 2.

side, with a well-marked point at bottom. *Suture*, quite shallow, but deepest at top. *Skin*, yellow, striped and marbled with deep

len for some particulars in regard to the leaves, habits, productiveness, origin, &c.

## THE LATE DR. JOHN A. KENNICOTT.

BY B. HODGE, BUFFALO, N. Y.

IN the August number of the *HORTICULTURIST* appears a very brief notice of the death of this distinguished and accomplished horticulturist and pomologist, who died at the Grove, Cook Co., Illinois, on the 4th of June. As the Doctor was truly a national man, a more extended notice seems most desirable. The Doctor was not only a national man, but also a representative man of his class, progressive, and intent, during a lifetime, on blending the beautiful with the good.

Dr. John A. Kennicott was born in Montgomery County, N. Y., about the year 1800. He was the eldest of thirteen children, several of whom studied the profession of medicine; hence, in after life, the subject of our sketch became widely known as "The Old Doctor." His father was a pioneer farmer all the days of his life; and his sons also followed the same profession. Dr. Kennicott once said to a friend, "At the age of eighteen I was considered one of the best axmen and wood rangers of any boy of my age and size; but I was miserably ignorant of all matters taught in schools." In a word, he was a self-educated man, having spent but a very brief period in the county school. About the year 1820 he left the farm in Cattaraugus County, and came to Buffalo, and commenced the study of medicine with Dr. Cyrenus Chapin. Possessing but limited means, after a brief preparation, he engaged in teaching school, and also served as clerk in a drug store. By these and other means he was able to obtain his profession, and attend a course or two of medical lectures.

While at Buffalo he made the acquaintance of that eminently good man, the late David Thomas, then Chief Engineer on the Erie Canal, and one of the very best botanists and horticulturists in the State. Both were most passionately fond of flowers, and spent many pleasant and profitable hours in their rambles in the forests and fields in the vicinity of Buffalo.

Their friendship and attachment continued

through life. The Doctor has more than once assured the writer, that he learned more about plants and shrubs from "Friend Thomas," than from all the world besides. The Doctor, having become a regular M.D., spent a year or two in practicing medicine on the Welland Canal in Canada, and, at times, delivered several courses of lectures on Botany. About the year 1828, having selected a partner for life in the person of Miss Mary Ransom, of Buffalo, a noble woman, well worthy indeed of her devoted husband, he proceeded west to seek his fortune, spending some time in Detroit, Cincinnati, Natchez, Jackson, Miss., etc., and from thence to New Orleans, where he spent some six or seven years in the practice of medicine, lecturing, and principal of "Upper Primary School." Here, also, he wrote much for the public press.

Finally, in the year 1836, he proceeded North, and purchased several hundred acres of land about eighteen miles west of Chicago. Here the Doctor soon erected a fine, snug log-cabin among the beautiful rustic trees of the sparse forest, whose grateful, cooling shade in summer made it a most delightful residence. A more stately mansion has since been erected. A very few years more, and the Doctor's flower-garden attracted public attention. "The Grove and the Old Doctor" became extensively known. The largest and the most extensive assortment of flowering plants, bulbs, roses, shrubs, etc., in all the West, were the Doctor's particular pets. In 1850 his Tulips alone covered nearly half an acre of land. The Doctor soon acquired a most extensive practice. In 1844, "The Grove Nursery" was commenced, the writer a silent partner; but in 1852 the Doctor and his sons became sole proprietors.

From 1836 to the close of his life few men in our country have done more than Dr. K. to promote the science of horticulture and pomology. For many years he was the Horticultural Editor of the *Prairie Farmer*, President of the Illinois State Horticultural

Society, and for several years, Secretary of the Illinois Agricultural Society. He wrote much for various papers, and continued it to near the close of life.

Dr. K. was the first President of the "American Pomological Society," which met in Buffalo in September, 1848, and also in Syracuse in September, 1849. It will, perhaps, be recollected that this Society, and the "American Pomological Congress," which started about the same time, were assuming the position of rival societies. At this crisis Dr. K. and other judicious friends of pomology exerted their influence, and finally, in October, 1849, united the two rival societies in one. In this good work Dr. K. took an active part.

The writer knew him well and intimately. He was a faithful and true friend, frank and generous to a fault, eminently social and self-sacrificing. He loved his friends, and, indeed, every thing that pertained to pomology, most ardently. Most honest and just in all his dealings, he hated every thing that looked like duplicity in others. Truly, he was one of Nature's noblemen. The following characteristic letter, written twelve days before his decease, and probably the last one he ever wrote, will be read with interest. Perhaps I ought to say, by way of explanation, that I am suffering from pulmonary disease of the lungs; hence the Doctor's allusions to myself.

*The Grove, Cook Co., Ill., May 23, 1863.*

MY DEAR OLD FRIEND, COL. B. HODGE,--Are you still alive? "I still live," but scarcely breathe. For two months I have been at Death's door with *laryngitis*, complicated with *heart disease*, &c., and lately with rheumatic pains in the chest. Dr. Frear attended me at first, and I expect him and Dr. Brainard out to-morrow. It was thought I could not live, as I breathe with great difficulty,

and often have to sit up twenty hours in the twenty-four; as I suffocate, if recumbent. The worst is, I *can't eat*, nor exercise. I now write for the first time in two weeks. I have been up since half past three A.M. I now write at six A.M. Very warm. . . .

Let me hear from you. I may suffer for this imprudence, but you and I should not neglect each other while we can hold a pen. I trust you do not suffer as I have of late. I have wished for death more than once; but I don't *want to die*, if I have any chance of being "comfortable again, and I seem to stand a heap of" killing. Strange, how much a man can live through. God be with you.

Your old friend, the Old Doctor,

JOHN A. KENNICOTT.

[We are much indebted to Mr. Hodge for this obituary of Dr. Kennicott. It is simply a duty to put upon record a proper acknowledgment of the services of a man who occupied a prominent position in horticulture, as did Dr. Kennicott. We were not acquainted with him personally, but we never heard of but one kind of testimony in regard to his services as a horticulturist or his character as a man. The "fathers" are fast passing away. May their mantles fall upon worthy sons. In regard to the Societies mentioned by Mr. Hodge, it may be as well to state that the one designated above as the "American Pomological Congress" is the present American Pomological Society, which was antecedent to the other society, and which had its inception in the mind of the present editor of the *HORTICULTURIST*, most of the original documents being still in our possession. The honor of bringing it before the public, and "footing the bill," belongs to the American Institute: facts which seem to be little known. It cost us weeks and weeks of incessant labor.—Ed.]

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## THE CEDARMERE PEAR.

BY THE EDITOR.

It may not be known to all our readers that Wm. C. Bryant, Esq., besides being our most

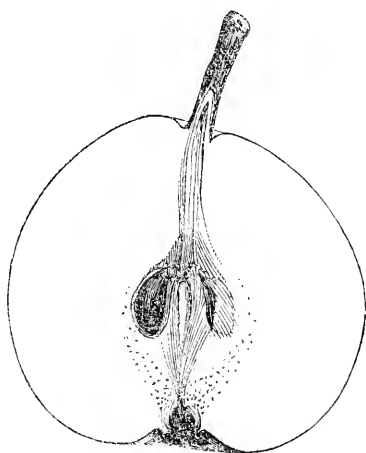
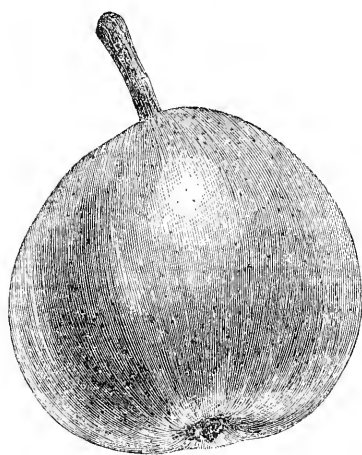
eminent poet, is entitled to no little distinction as an amateur pomologist. He has an exten-

sive collection of fruit, especially pears, at his fine country seat at Roslyn, L. I., and he takes great delight in ministering to their wants and expatiating on their merits. The pear at the head of this article is one of his seedlings. Mr. Bryant is probably the only poet who ever raised a good seedling pear. We shall figure another of his seedlings by and by.

The *Cedarmere* (a very pretty name) is so

Dearborn's Seedling, but ripens before it. The following is a description of the fruit.

*Size*, small. *Form*, obovate, unequal. *Stem*, three quarters of an inch long, inserted in a very slight depression. *Calyx*, closed, in a very small, shallow basin, slightly wrinkled. *Color*, greenish yellow, with occasional russet spots. *Flesh*, white, fine grained, melting, juicy, aromatic. *Seed*, small. *Quality*, very



THE CEDARMERE PEAR.

named, we presume, because it originated near Mr. Bryant's beautiful little lake. He very kindly sent us a basket of the fruit on the 30th of July, which we continued to eat for a week or more. It is one of the best pears of its season. It is about the size of

good. *Season*, last of July and beginning of August.

The Cedarmerre is worthy of a place among the pears of its season. Perhaps Mr. Bryant will furnish us some particulars in regard to its productiveness, habit of growth, &c.

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### WHAT AN AMATEUR LOVER OF HORTICULTURE ACCOMPLISHED.

BY W. A., POUGHKEEPSIE, N. Y.

SOME twenty-five years since, the late Judge Barculo, of Poughkeepsie, one of the most diligent students, accomplished lawyers, and eminent Christian jurists New York has ever known, purchased a small lot, and erected a house, in the suburbs of that city. He had a natural love for horticulture, and at once began to ornament his little barren inclosure with flowers and trees. In his locality there was then little else than unoc-

cupied fields. He was young in his profession, and had just married an accomplished lady from New York. Happily, her taste and energies were in correspondence with those of her husband. Successive years passed, and with them followed eminent professional reputation and increased wealth. With these came an extension of his grounds, and a multiplication of his trees, flowers, and shrubs, until nearly seven acres



were literally covered with the choicest productions of pomology and the horticultural art. At his death, some nine years since, there was not a residence on the Hudson, of its acres, which could compare with "Rose Cottage," for the variety and quantity of fruits, beauty of shrubs, and elegance of landscape gardening. The peculiarity of it is, that his grounds were all perfected by *his own energy and taste*, during hours subtracted from a most laborious and distinguished professional life.

What Judge Barculo accomplished as an amateur, for himself, for his descendants, and for society, in this department of usefulness, has been recalled by reading various communications from his pen in some former numbers of your delightful and instructive journal. It was then, editorially, in the hands of the accomplished Mr. Downing. In Vol. 4th, page 406, there is a communication from "B., of Poughkeepsie," on the "Curculio." Other articles from the same pen were published in previous volumes, on "Strawberries" and "Pears," to the culture of both of which Judge B. devoted much time, and felt the deepest interest. He was one of the earliest and most successful cultivators of the former delicious berry on the Hudson. His experiments were interesting and valuable, and the varieties he procured were numerous. To this day, no private grounds yield more delicious fruit or larger quantities, than his former homestead.

To get an idea of the extent of Judge Barculo's amateur fruit culture, in 1850, in his article on "Pears," he states that he *then* had "600 pear trees, with 90 varieties;" 15 of them he himself had imported from France. His paper on the "Curculio," in 4th volume, shows how indefatigable he was with his experiments for their destruction, and what success crowned his efforts. At that time, (1850,) he had "75 plum trees" in full bearing. To show the discouraging mortality of trees, it may be added, that at this time, (August, 1863,) there is not one of those original trees surviving! In introducing his communication on "the Curculio," Mr. Downing remarks: "Our

correspondent, who modestly withholds his name, is known to us as one of the most able jurists in the State. He devotes his leisure to the pleasures of horticulture, and experiments in his garden, with the same knowledge and precision with which he delivers his opinions on the Bench." In the 5th volume of the *HORTICULTURIST*, Judge B. had a paper on grapes. He then had nearly 500 vines, with thirty varieties, but ultimately he reduced them to three of established character, adapted to the climate. Of apples, peaches, pears, cherries, quinces, and the various small fruits, such as currants, blackberries, gooseberries, raspberries, his grounds were properly supplied. His collection of beautiful shrubs and flowers, embracing all the choice varieties of roses, and also tulips, lilies, phloxes, geraniums, honeysuckles, etc., were then, as they now continue to be, almost unsurpassed in those cultivated and beautiful grounds. No one had better vegetables, thus mingling the useful and ornamental.

Judge Barculo began to exercise his taste for horticulture as a relaxation from professional duties and to invigorate his health. It soon became an absorbing passion, and every hour he could secure from laborious legal and judicial toil, he spent in his delightful grounds. There he felt buoyant and happy. No professional business or visitors were permitted to obtrude there. At "early morn" and "dewy eve" he was laborious in experimenting with fruits, and testing their qualities and capacities, after years had been spent in gathering the choicest varieties from the best sources in the country. He labored not for himself alone, but for other generations. The avenues of noble shade trees which border the roads adjoining his favorite grounds show what the public have gained from his labors. These are in addition to the almost exhaustless variety of beautiful flowers and fruit trees gathered within that choice inclosure, trees which "yield in summer fruit and shade—in winter, fire."

It will thus be seen what were the early and later efforts of a private gentleman, en-

gaged in absorbing and laborious professional pursuits, to advance the subject of horticulture. With what success he indulged his tastes and devoted his leisure hours to the work! He lived to see his uncultivated and enlarged home-lot blossom like the rose, covered with the choicest Peach, Pear, Cherry, and Apple trees, and yielding an excess of most delicious fruits and flowers. His example was contagious, and it stimulated others in the work of growing the best varieties of every thing the earth would yield. Not satisfied with obtaining rare fruits, and an abundance of each variety, he experimented to a large extent to determine the drink each would yield. He subjected not the Grape alone, but Cherries, Strawberries, Gooseberries, Raspberries, Blackberries, and Currants, to the wine-test, and of each, years after his death, some choice specimens are now still in existence. Even these were tributary to his zeal, and energy, and enthusiastic devotion to the productions of Nature, and their varied and boundless resources.

The hours which many professional men devote to office gossiping, or to unprofitable amusements, Judge Barculo devoted to his grounds and his love of horticulture. Early and late, he shared in the toils of his working men, doing any thing his hands could find to do, and doing it *well*. This was the secret of his success, and in these successes was embodied his pleasures and his happiness. He lived to enjoy the fruits of his industry for many years, and now, long after he has been gathered to his fathers, his estimable family are in the full enjoyment of his labors and his beautiful homestead. They are still the admiration of every lover of landscape gardening, of delicious fruits, and of shrubs and flowers, outrivalled by few grounds in the valley of the Hudson. It is not trespassing upon the delicacy of private life to add, that his accomplished and energetic companion of early life, in

later years, has well sustained the beautiful taste and elegant floral culture of her deceased husband.

Permit me to remark, in conclusion, that the fruit cultivated by the late Judge Barculo was all of it of the very finest quality. Every tree, and shrub, and vine was thoroughly tested by him. That which was superior was retained; the inferior was rejected. Hence, the annual yield of these grounds, even now, continues great, and the character of the fruit and flowers of the very best kind. An idea of the extent of Judge Barculo's amateur labors, and their present productiveness, will be suggested by a list of the fruit trees, made during several leisure walks through the grounds. The numerous Quince bushes, and Plum trees, and Grape vines are not enumerated; neither are the almost endless variety of Black, Red, and White Currants, Strawberries, Blackberries, Raspberries, or Gooseberries mentioned—only the large fruits. There are now on the premises, embracing seven acres, 138 Apple trees, 560 Pear trees, 25 Peach trees, (formerly there were great numbers, but they have died out within a few years,) and 116 Cherry trees; grand total, 842 fruit trees! What a beautiful living monument to the memory of an amateur horticulturist, an eminent Christian man, and an accomplished jurist!

[Judge Barculo was a remarkable man in more respects than one. His labors as a horticulturist should be held in grateful remembrance by all who love fruits and flowers; more especially as his native modesty prevented him from parading them before the world. But these labors were, notwithstanding, pretty well known, and exercised a marked influence, which has not ceased to be felt even now. There are thousands who have gardens because it is fashionable, who might emulate his example with profit to themselves and good to the world.—Ed.]

## AMERICAN SHADE TREES.—THE ELM.

BY C. N. BEMENT, NORTH SHORE, S. I.

"If we ascribe to the character of the Oak eminent dignity," says a writer, "let us now claim for the Elm the epithets of graceful and elegant. This tree is one of the noblest in the size of its trunk, while the branches are comparatively tapering and slender, forming themselves, in most of the species, into long and graceful curves. The leaves are light and airy, of a pleasing light green in the spring, growing darker, however, as the season advances."

The Elm is one of the most common trees in this country, well known since a remote period for its graceful beauty and usefulness, and is entitled to high regard. Though it is found in almost all parts of the country, in no other is it so conspicuous as in the valleys of the Connecticut, Upper Hudson, Mohawk, Genesee, and the Northeastern States, where, from the earliest settlement of the country, it has always been highly prized, and planted as a shade tree, as an ornament above the proudest importations from a foreign clime. Standing alone as a single tree, or in groups of at most four or five in number, it develops itself in all its perfections. It often runs up to a great height before it forms a head, like the venerable Elm conspicuous in a grove of Elms and Maples, which shade the green, in the old and picturesque town of Pittsfield, towering far above the house-tops—celebrated in its history—which has weathered the storms of centuries, and stands a gray and solemn monument of the past.

It often rises upward, with an undivided shaft, to the height of fifty feet or more without a limb, and bending over with a gradual curve from about the middle of its height to its summit, which is sometimes divided into two or three terminal branches. The whole is covered, from its roots to its summit, with a fringe of vine-like twigs, extremely slender, twisted and irregular, and resembling a parasite growth. At other times, it is subdivided at the usual height,

into three or four long branches, which are wreathed in the same manner, and form a complete plume.

The Elm is the most remarkable of the drooping trees, except the Willow, which it surpasses in stateliness, and in the variety of its growth. It is also remarkable for the many forms which it assumes in different situations. Often it has a drooping spray only when it has obtained a large size; but it almost invariably becomes subdivided into several equal branches, dividing from a common center, at a considerable elevation from the ground. One of these forms is that of a vast dome, as represented by those trees that send up a single shaft to the height of fifty feet or more without a limb, and branching over with a graceful curve from about the middle of its height to its summit, which is sometimes divided into several branches, giving it a spreading, umbrella-like head.

These fantastic forms are very beautiful, and do not impress one with the idea of monstrosity, such as is produced by the sight of a Weeping Ash. Though the Elm has many defects of foliage, and is destitute of those fine autumnal tints which are so remarkable in some other trees, it is still almost without a rival in the American forest. It presents in its forms a variety not to be seen in any other tree, possessing the dignity of the Oak without its ruggedness, and uniting the grace of the slender Birch with the majesty of the Norway Spruce.

The White Elm we consider the most beautiful of the family. It is the most remarkable of the drooping trees, except the Willow, which it surpasses in stateliness, and in the variety of its form, in the most perfect manner. Its branches first spring up, embracing the center, then bend off in finely diverging lines, until, in old trees, they often sweep the ground with their foliage.

When we look upon the noble Elm, admiring its grace and its majesty, we think of the great amount of human happiness and of comfort to the inferior animals of which it has been the blessed instrument. How many a happy assemblage of children and young persons has been, during the past century, repeatedly gathered under the shade in the sultry noons of summer! How many a young May Queen has been crowned under its umbrageous roof, when the green-sward was just daisied with the early flowers of spring. And how many weary travelers have rested from their journey in its benevolent shade, and from a state of weariness and vexation, when overspent by heat and length of way, have subsided into one of quiet thankfulness and content!

To a native of New England, like ourself, the Elm has a value more nearly approaching that of sacredness than any other tree. Setting aside the pleasure derived from it as an object of visual beauty, it is intimately associated with the familiar scenes of home and the events of our own early life. In our mind, it is pleasingly allied with those old dwelling-houses which were built in the early part of the last century, and form one

of the marked features of home architecture at that period. They are known by their broad and ample but low-studded rooms, their numerous windows, with small panes, their single chimney in the center of the roof, that sloped down to the lower story, and their general unpretending appearance, reminding one vividly of that simplicity of life which characterized our people before the Revolution. Their very homeliness is delightful, by leaving the imagination free to dwell upon their pleasing suggestions. Few, if any, of these old houses are now to be found; but, whenever we see one, we are almost sure to find it accompanied by its Elm, standing upon the green open space that slopes up to it in front, and waving its long branches in melancholy grandeur over the venerable habitation, which it seems to have taken under its protection, while it droops with sorrow over the infirmities of its old companion of a century.

[The Elm, beyond all doubt, is one of the noblest of all our deciduous trees. As a specimen tree for the lawn it has few equals. Mr. Bement, with all his New England associations, is not likely to say too much in its praise.—ED.]

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### THE CONCORD GRAPE—REPLY TO MR. HUSMANN.

BY J. F. DELIOT, SING SING, N. Y.

MR. EDITOR,—I am disappointed; I thought there would be at least half a dozen raising a storm against me for attacking the pet of Messrs. Husmann and Co., or the friends of Concord; but I was aware of what I was doing, and knew that I had a good shelter to retreat under, in case of need; and, being on the side of truth, a thing pretty hard to fight against, and seeing only one replying, and that one on very slippery ground, I feel I can confute his arguments very easily. It is my opinion, that if he had waited a month longer before commencing the battle, he would have used different weapons. Let us see.

Mr. Husmann begins by saying that my observations would serve to mislead your

readers. We shall try to find out who of the two is trying to do this. I think Mr. H. puts himself in the dark by his first remark; he says: "Mr. D., from the general tone of his remarks, seems to live in some cold nook of our Union, where even the Concord will not ripen; for it is plain that he has never tasted of a ripe Concord." Had Mr. H. been in the possession of his senses when he wrote this, he would not have said so. We consider the Concord grape rather an early grape here. It is plain enough to understand, that if we can't ripen that grape here, we could not any other, except, perhaps, the Delaware, which ripens a few days before, and we would certainly be living in a very poor

country for that fine fruit, (pretty near to that cold nook which Mr. H. indicates.) We are happy to assure Mr. H. that we are more fortunate, not only perfectly ripening the Delaware and Concord, but also a good many other varieties.

I have tasted that "incomparable Concord" in about twelve to fifteen places, and in all stages; half ripe, ripe, very ripe, and over ripe, and think that I know what is good as well as Mr. H., and I have always found it bad, or not so bad, but never good. True, I have never tasted the Concord our friend H. speaks of, as possessing *fifty drops* of juice in each berry, almost without pulp, that pulp having dissolved in fifty drops of fine juice, fine flavor, very slightly foxy, thin skin, sweet, etc., and with all this not called best, but only very good. Why don't he call it the king of grapes, the nonsuch, the incomparable, the—! Mr. Editor, if we could find a grape half as good only, (as the one described,) we would lavish on it the sweetest names we could think of.

That is too much, friend Husmann. Those living in "the cold nook of the Union" find it hard to swallow your story. I must drink a tumblerful of Delaware wine, made last fall, to take away the taste of those fifty drops of Concord juice.

Let us see further, now: "Pray be quiet, my dear D.," (quoting Mr. H.,) "until I have explained what I mean. I don't call a grape ripe when fairly colored," etc. Poor friend Husmann, he must be out of his head to think that nobody but himself knows when a grape is ripe. He goes from one mistake to another. He invites us to come and see him. He is very kind, but I think if he thought we would accept the invitation, he would perhaps not be so well pleased, knowing that we could not find grapes with fifty drops of juice in each berry at his place, nor any where else. Mr. H. furthermore says: "The vine (Concord) is a strong, healthy grower, and will succeed in any soil, so as to give a fair crop under any treatment." (I say so too.) "It is entirely free from disease, and hardy." (I say the same.) "It is, under proper treat-

ment, a great bearer, and always ripens its fruit well." Who told Mr. H. that that was not so? "It has a fine, large, handsome bunch and berry, which sells readily in market." That is all that it is good for, (to sell, I mean.) It sells well in the market, because (I say it again) it is not known yet by the mass. No, sir, it is not known yet. I am sure of what I say. A good many like what is large and showy, and therefore keep it for show till it rots, or till they are tired of seeing it; then they throw it in the heap of manure; but this would be, perhaps, different, if we were living under such a blessed sun as our friend from the west, a sun which dissolves the pulp (very likely the seeds too) into fifty drops, not exactly of Delaware juice, but with something not bad to take either. Well, our friend is sometimes right, for he don't say the quality is very good, but simply good, or not bad; but a good many things, if not bad, are not good, and we would place the Concord among this class.

"Please tell us, D., where you hail from," asks Mr. H., "as a country where the Concord does not grow any better than you represent it, must not be far removed from everlasting snow and cold fogs." Well, friend H., I hail from Sing Sing, about thirty miles from New York. If you ever visit the east, bring a couple of your nonsuch grapes along, and I will let you have some Delaware juice that I think will put your palate in better condition; but I think you did not read my article well. You must not forget your spectacles the next time. Here are my own words: "The Concord is a very big grower. It is very healthy, rather large fruit, large berries, with a fine bloom, and gets ripe soon enough to have its fruit in season every year." It is plain enough that the Concord grows pretty well in my cold, foggy country; but by your remarks you would lead us to believe rather that your part of the country was not first-rate for the grape, if, as you say, it is only the Concord, out of sixty varieties, you are able to grow with profit. Your sun seems to be good only for the Concord.

I think, Mr. Editor, I am too long. I must

cut myself short. I can not pick up all the mistakes of Mr. H.; but I can not part with him without telling him that I am very sorry for his bad luck with the Delaware. We have better luck here. Last fall I made some wine from this grape, (about twenty-four gallons), with grapes taken from three and four year old single eyes, or of the second and third year's planting, and I consider it pretty fair wine; but there were not ten pounds of grapes taken from each vine, nor were there seven thousand first-class layers taken from five hundred vines, viz.: Mr. Husman's statement, who in the year 1861 planted five hundred good-for-nothing Concord vines, which in 1862, in the month of June, were destroyed by a hail storm, and from which destroyed vines there were made, in the month of July, seven thousand first-class layers, and which same destroyed plants bore or bear ten pounds a piece, on an average, this year. Truly, that is unexampled. No wonder Mr. H. likes the Concord better than the Delaware; he could not have made so many first-class layers at the second year's plantation of the latter.

My friend H., you exaggerate too much; but it turns against you this time. By it you let us know why you think so highly of the Concord; it is, because you can make more plants of it, and make them easier; and so, of course, make more money with less trouble. You perceive that you put yourself among the category of nurserymen I alluded to.

I think, Mr. Editor, that your friend from the west is an extraordinary man. He grows the Delaware by cuttings without difficulty, but can not grow it when it is rooted. That is rather queer. We are just the opposite here. We can not grow it with profit from cuttings, but we succeed pretty well the other way.

Mr. Editor, we must go and see so many

wonderful things in such a blessed country, since the invitation is so hearty. Our friend H. must have plenty of that Concord juice, that he pronounces as good as the best Catawba, if not superior. I like the juice of the grape when good and pure, (we could make room for some more) but I have tasted some Catawba wine, called very good, and could not drink it, because there was too much sugar in it. Now, before going to drink the wine of Mr. H., I should like to know how it is made.

Now, Mr. Editor, one word more, and I am done. I think a good many of the Concord growers know as well as we that for more than two hundred years somebody has been trying to find the grape for wine purposes, but has always failed in this part of the globe; not because the climate is not good, but because it has been tried with wrong kinds. Some tried with foreign, some with native, but because success did not attend them, shall we give up? No, we will not, and our perseverance will be rewarded. The grape for that purpose has been found; it is the Delaware. I do not say that it is perfect. We must find a better one; but I say that, for the present, it is the best grape known or grown in America. Let all men in this country unite and stick to it, that if the wine was plenty, there would be eight-tenths less drunkards than now. Wine would take the place of that poison called brandy, and the improvement thereby would be incalculable. The Delaware, and Delaware alone, is the grape for that purpose. Whatever the Concord advisers may say, I, for my part, prophesy that the Delaware will come out the victor.

[Mr. Deliot, it will be seen, likes a little playful badinage as well as good Delaware grapes. We have said all that it is necessary for us to say at present.—Ed.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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THE GRAPES AT FOX MEADOW GARDEN.—About two months since we stopped in for a few moments to look at the grapes at this fine place, under the management of our correspondent, Fox Meadow. We were a little curious to see how the vines looked after another year's ramble in their muck bed, and what manner of crop they carried. We were fully satisfied on both points. The vines were bright and vigorous, and laden with large and handsome bunches of delicious fruit. Better vines or better grapes we have never seen. There are no signs of "giving out" any where. This must be a source of deep satisfaction to Mr. Ellis, after some eight years of continuous forcing. We saw beautiful bunches of Muscats and Hamburgs weighing from two to three pounds each, which were being cut for market; we came pretty near breaking one of the ten commandments, but Ellis wouldn't let us. We came away more than ever convinced that muck is a good thing for grapes.

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MODEL REPORTS.—The season will soon arrive again for model reports. Grape rot and mildew will figure largely in some of them. When this is the case, we should be glad to have a statement of the condition of the soil, when and how manured, with what, &c. When we get statistics enough together, we purpose collating them, and laying the results before our readers in tabular form.

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PLANT LABELS.—We have had repeated inquiries for good and cheap plant labels, but until lately have seen none that answered both conditions. We have been using some

recently which we consider both cheap and good. They are neatly made of pine, some being pointed and others pierced for a wire. They are of various sizes, and can be purchased for a dollar a thousand, cheaper than mean ones can be whittled by hand. We commend them to all who grow plants. They may be had of Fleming & Davidson, 67 Nassau St., New York. They have also a very useful article in the way of pegs for pegging down plants, which they sell cheaper than one can cut up brush.

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GRAPE ROT AND MILDEW.—We are sorry to say that the extraordinary weather of July and August has been extensively productive of mildew and rot in the grape. In some vineyards fully one-half the crop will be lost. The Concord this year has in many places rotted even worse than the Catawba; this not only confirms our position, but will enlighten those who have insisted that the Concord is entirely free from disease. When we stated that the Concord was liable to mildew and rot, in common with other vines, the statement was received by some with surprise. It is proper enough to say, in general terms, that it is vigorous and healthy; but to insist that it is entirely free from disease is not warranted by the history of the Concord, or by a profound knowledge of the grape generally. All grapes are subject to a common law, in this respect; some constitutionally enjoying a greater immunity than others. It is to be hoped that a day will come when this disease will be understood, and an efficient remedy found.

PENNSYLVANIA HORTICULTURAL SOCIETY.—We are much pleased to learn that this Society will resume its annual exhibition this year. There has been no public exhibition since the destruction of the Chinese Museum, as that was the only building of suitable size in Philadelphia. Their noble Academy of Music, however, now affords them all the room they want, and in this they will open on the 15th of September, and continue three days. This opera house is the largest in the world, with the exception of those at Munich and Milan. It is thoroughly ventilated every few minutes, we are told, by a steam fan. The parquet and stage will be floored over, and devoted to plants and flowers, while a large and beautiful room, called the "Foyer," will be used for fruits, table designs, &c. We have no doubt that in the way of decoration, every thing will be done that good taste can suggest. We are informed by Mr. King, the enterprising chairman of the Committee of Arrangements, that "an orchestra, the best in the city, will discourse the finest music during each evening." A very liberal prize list has been provided, and competition has been thrown open to all parts of the country. The members seem to have set themselves to work in good earnest; they deserve, and we hope, will meet with, an abundant success. Contributions must be addressed to Thomas P. James, No. 630 Market Street, and schedules of premiums can be obtained of the Secretary, A. W. Harrison, No. 26 South Seventh Street, Philadelphia.

GRAPE EXHIBITION IN NEW YORK.—At a meeting of the Fruit Growers of New York, held August 13, it was decided to have a Grape Exhibition this fall, at the rooms of the *Agriculturist*, 41 Park Row, and the following gentlemen were appointed a committee to make the necessary arrangements: Messrs. Peter B. Mead, R. G. Pardee, Dr. Ward, Wm. S. Carpenter, A. S. Fuller, and Dr. Grant. The necessary funds having been provided, the following list of prizes was adopted:

#### NATIVE GRAPES.

A.—Best Native Seedling Grape that has

never taken a prize, of superior quality, and ripening in open ground not later than September 20th. Satisfactory proof of time of ripening to be furnished, \$10. B.—For the best collection of Native Grapes, (amount and quality both considered,) not less than 12 kinds, 5 bunches of each, \$10. C.—For the second best collection of Native Grapes, (amount and quality both considered,) not less than 12 kinds, 5 bunches of each, \$5. D.—For best Six Varieties, 5 bunches of each, \$4. E.—For second Six Varieties, 5 bunches of each, \$2. F.—For best Four Varieties, 5 bunches of each, \$3. G.—For second best Four Varieties, 5 bunches of each, \$2. H.—For the best 5 bunches of Native Grapes of any kind, quality to rule, \$2. I.—For the best 5 bunches of Delaware, \$2. J.—For the best 5 bunches of Diana, \$2. K.—For the best 5 bunches of Catawba, \$2. L.—For the best 5 bunches of Isabella, \$2. M.—For the best 5 bunches of Concord, \$2. N.—For the best 5 bunches of Hartford Prolific, \$2. O.—For the best 5 bunches of Herbemont, \$2. P.—For the best 5 bunches of Elsingburgh, \$2. Q.—For the best 5 bunches of Creveling, \$2. R.—For the best 5 bunches of Union Village, \$2. S.—For the best 5 bunches of Anna, \$2. T.—For the best 5 bunches of Allen's Hybrid, \$2. U.—For the heaviest bunch of any kind, \$2.

#### FOREIGN GRAPES.

V.—Best Six Varieties, 2 bunches each, \$5. W.—Second Six Varieties, 2 bunches each, \$3. X.—Best 2 bunches Black Hamburg, \$1. Y.—Best 2 bunches Muscat of Alexandria, \$1. Z.—Best 2 bunches Grizzly Frontignan, \$1. *aa.*—Best 2 bunches of any other kind, \$1. *bb.*—Other Special Prizes to be awarded by Judges, for extra specimens not included above.

REGULATIONS.—1. The Judges will be requested to test specimens by actual taste, and to make all other points subordinate to that of quality, except in prize U. They will disqualify all lots not meeting the terms of the schedule, including the number of bunches called for (except in prizes B and C.) All bunches above the required number must be



laid aside until after the Judges have given in their decision, when the exhibitors may add to their specimens at their pleasure.

2.—Exhibitors should give at least three days' notice of the space required, that room may be provided for them.

3.—All specimens to be on the table by 11 o'clock A. M., Thursday, October 1st. The Judges will have exclusive use of the rooms from 12 to 2 o'clock, after which the public will be admitted. After the awards, the Prize specimens will be labeled. Exhibitors may then put on their specimens their cards, place of business, etc. No fruit will be removed before 4½ o'clock P. M., Saturday, without special permit. The fruit, of course, will belong to the several exhibitors, at the close of the Exhibition.

This is a very fair and liberal list, very much more discriminating than the average. Instead of making Anna compete with Diana, each kind competes with itself, as it should. Prize H provides for the best sample of native grapes, which the judges will select from all the samples in the room, whether entered under the head of H or not, the object being to distinguish the highest flavored grape exhibited. Special exhibitions have much to commend them, and we hope this one will meet with a most decided success.

The following gentlemen have been appointed judges: Messrs. Marshall P. Wilder, Charles Downing, John E. Mottier, A. W. Harrison, Dr. J. B. Chapin, T. T. Lyon, J. Dailledouze, Isaac Buchanan.

A MODEL ORDER.—The following is a model in its way, and we print it for the benefit of our advertisers. It tells us in a few words precisely what to do. Advertisers should always state how much room they want to occupy. It sometimes saves a great deal of trouble when the bill is rendered.

GENTLEMEN,—Please give annexed advertisement a ten line insertion in September, October, and November numbers of *HORTICULTURIST*, and inclose bill. Truly yours,

EDWARD J. EVANS & Co.

NEW JERSEY STATE AGRICULTURAL SO-

CETY.—This Society will hold its eighth annual exhibition at Paterson, on the 8th, 9th, 10th, and 11th of September. New Jersey has the material for a splendid exhibition, especially of fruits, if properly brought out. The season for fruits has not been very propitious; still there is enough for a good show. The prize list is a good one, especially in the stock department. The prizes for fruits and flowers are not sufficiently definite and discriminating, but quite as good as the average. We hope Jersey men will feel called upon to do their best for their own society, and infuse new energy and vigor into it. There are not a few Jersey men who do not know they have an Agricultural Society; we hope they will learn the fact in time to go to Paterson in September with the best they have.

We learn that our friend, Dr. Trimble, has been appointed Entomologist to the Society. The appointment is an excellent one. The Doctor's duty, of course, will be to rid the State of noxious insects. We hope to see him down in old Bergen.

#### BOOKS AND CATALOGUES RECEIVED.

Flowers for the Parlor and Garden. By Edward Sprague Rand, Jr. Boston: J. E. Tilton & Co., 1863. We have not completed our examination of this volume yet; but will do so in time for our next number.

David D. Buchanan, Reid's Nurseries, Elizabeth, N. J.—Catalogue for 1863 and 1864, of Fruit and Ornamental Trees, Flowering Shrubs, &c. Also, Wholesale Price List of Fruit Trees, &c.

Ellwanger & Barry, Rochester, N. Y.—Descriptive Catalogue of Hardy Ornamental Trees, Shrubs, Roses, &c. Also, Wholesale Catalogue or Trade List of Fruit and Ornamental Trees, Shrubs, Roses, Dahlias, Bulbous Roots, &c.

E. Ware Sylvester, Lyons, N. Y.—Wholesale Catalogue of Lyons Nurseries.

Bronson, Merrell, and Hammond, Washington Street Nurseries, Geneva, N. Y.—Descriptive Catalogue of Select Fruit and Ornamental Trees, Shrubs, Vines, &c.

## CORRESPONDENCE.

FRUIT IN ILLINOIS.—Mr. Cutter, of Beverly, Adams County, Illinois, writes as follows in regard to fruit in his locality:

"We have a very good prospect for fruit. Apple and Peach trees are full; so are the few Pear trees that are old enough. Cherries have been plenty; but the early ones brought such a raft of birds that late ones will be all taken by them. I am inclined to believe that some of these *beautiful* little feathered *songsters* are doing us more harm than good. But I am, perhaps, not qualified to judge, for I think more of a quart of Cherries than I do of a *song* from a *cat-bird*. Some say that to them we are indebted for every crop we raise in orchard or field; for they would all be devoured by insects, if the birds did not destroy so many of them. That they do devour a great many insects, no one can dispute; but all insects are not our enemies, and I believe that certain kinds of insects are doing us more good than all the birds do, and, as they most likely make no distinction between friend and foe, their operations in that direction are doing us but little good.

"Strawberries have done well. We have Hooker's and Hovey's Seedlings, Austin Shaker, Triomphe de Gand, Wilson's Albany, and Downer's Prolific. The Downer's Prolific is second best in quality, and more than doubles any thing else we have in productiveness. Besides, it is the strongest grower and hardiest variety we have. Other fruits promise well, except Raspberries, Quinces, and Plums, which, from our experience, are nearly as worthless as weeds."

We are glad to hear that you have such a good prospect for fruit, and shall be glad also to learn that such is the case in many other places; for in some localities, especially in portions of New Jersey and along the Hudson River, the crop of Apples and Pears will be meager indeed. The cat-bird is a little sauce-box, and is no favorite of ours; but you must be careful to distinguish between

the birds that befriend us and those that do not. Contrive some plan to frighten them away. This may be done with most birds, but not easily with the cat-bird; for he heeds stones as little as he does straws. We have known him even to force his way through a net, the meshes of which were scarcely large enough to admit his body. We know of an old gentleman, who, determined to save his Cherries, fixed a cow-bell in one of the trees. The bell-rope was brought to the piazza of the house, where the old man, with pipe in mouth, took his seat; and whenever a bird alighted on the tree, "ding-dong" went the bell. The thing answered very well for a few days; but the birds soon got accustomed to the sound, and seemed then rather to like it: at all events, they "faced the music" bravely, and had their fill of Cherries. A Boston gentleman placed a stuffed cat in his Cherry tree, and had the satisfaction of gathering the fruit. Some such plan as this might be generally adopted, and thus the birds be spared for the good they really do, and prevented in a measure from doing much evil. Why are your Raspberries, Quinces, and Plums "nearly as worthless as weeds?"

P. B. MEAD, ESQ.: *Dear Sir*,—I propose to grow a few peach and pear trees upon a trellis, somewhat after the method of Du Breuil, and should esteem it a favor if you can furnish me a list of a few varieties suitable for this mode of culture.

I suppose apricots, nectarines, and plums would succeed if some plan could be devised to protect them from the attacks of the curculio. What do you think of a mosquito net hung on each side of the trellis for a few weeks, during the time of the attack of the insects? My grounds are not very extensive, and economy of space is an object. I shall try the experiment next fall or spring, if you give me any encouragement. Some weeks ago my attention was called to this subject, by seeing a trellis of peach trees, in a flourishing condition, grown on this system, at the

garden of a gentleman residing on the banks of the Hudson, not many miles from your city.

If it will not occupy too much of your time, please name half a dozen varieties of each of the fruits I have mentioned, and tell me the best time to plant, whether spring or fall. Also the proper age of such trees.

By so doing you will much oblige a

JERSEY AMATEUR.

[Your grounds being of limited extent, you have decided upon an admirable method for growing your Peaches, etc. The trellis you saw, we suspect, was in the garden of an amateur friend of ours, one of our pupils, who is growing his Peaches in this mode with much success. We shall before long give an illustration of it for the benefit of our readers. About a dozen years since we planned a double system for a friend who lost his buds nearly every winter by the cold. It enabled him to protect his trees with facility, and gave him an annual crop of fruit. In answer to your questions we would say, that the mosquito netting will afford you the desired protection, and can be applied readily in this case. Of Peaches, the best kinds for your purpose are the following: Grosse Mignonne, Bergen's Yellow, Crawford's Early, Crawford's Late, Early York, George the IVth, Prince's Paragon, Haines' Early Noblesse, Oldmixon Cling, Oldmixon Free, Heath, and Yellow Rareripe. Of Apricots, Breda, Early Golden, Moorpark, Peach. Of Nectarines, Boston, Early Violet, Elruge, Stanwick. Of Plums, Coe's Golden Drop, Green Gage, Imperial Gage, Reine Claude de Bavay, Huling's Superb, Washington, Yellow Gage. In regard to the time of planting, we should do this in the fall early. This system of training can not be successfully started unless you have "maiden" trees, and it would be even better to procure those that have been worked or budded during the present season. We shall be glad to give you any other information you need.—Ep.]

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MR. MEAD:—I received yesterday the August number of the *HORTICULTURIST*, and

was most interested in the inquiries of my Minnesota neighbor, and your replies. Yet, on the strength of ten years' experience in fruit-growing here, I will venture a suggestion or two, and if they prove worthless, you will, of course, reject them.

Your correspondent's suggestion, that we of the extreme Northwest must go to a cold climate for fruits adapted to our section, though good in theory, is untenable in practice, for those apples which prove most successful here, come to us from the most dissimilar climates, as Red June, from Carolina; Rawles' Janette, from Virginia; Keswick Codlin, England; Fameuse, from Canada, &c., &c. The *reason* I can not give; the *fact* I *know*.

I was pleased with the list of apples which you advised him to plant, for it is the best one I have ever seen from the pen of an Eastern man, though some, as Gravenstein, Yellow Bough, and Rambo, will certainly winter-kill. With your leave, I will send a short list of varieties that grow thriftily and bear abundantly here: Red Astrachan, Red June, Sweet June, Sops of Wine, Oldenburg, Keswick Codlin, St. Lawrence, Bailey Sweet, Fameuse, Winesap, Jonathan, English Golden Russet, Northern Spy, Tallman Sweet.

Of pears I have a standard White Doyenné, five years planted, that is loaded almost to breaking with the smoothest of fruit. Bloodgood, Onondaga, and Belle Lucrative, at the same age, are showing fruit sparingly. Tyson, Flemish Beauty, and Seckel, though not in bearing, appear hardiest of all. Bartlett, Louise Bonne de Jersey, and Vicar of Winkfield, are *dead, dead, dead*.

Of cherries, Early Richmond, Donna Maria, and Plumstone Morello, grow and bear. May Duke grows, but fruit buds winter-kill. Belle Magnifique, Carnation, Hortense, Black Tartarian, Yellow Spanish, are all gone.

Of plums we have numerous wild varieties of fair quality, whose thick skin serves as a shield against the curculio. So, I think the finer sorts will be little cultivated here until some easy way is discovered of circumventing the Little Turk. Peaches are green-house plants here.

I want to talk grapes with you an hour, but can not take the time now, though I must notice your remarks on protection, which, you say, is the chief want in Minnesota.

Now, I sell a great many fruit trees every year, and always choose planting them on *dry* ground, where the *wind can have a fair chance at them*. Why? Because the wind *equalizes* the temperature. We have a very bright, hot sun here, in winter, and terribly severe cold at night. On the south side of a grove, or hill, the hot sun and still air will start the sap in a midwinter noon, and in twelve hours that same tree will be exposed to a temperature of—30°. Few trees will ensure such violent changes. On an unprotected knoll the nights are no colder, and the blistering sun of noonday is modified by the prairie winds. That is the theory, and the teachings of experience sustain it. Let your trees branch at 12 to 18 inches from the ground, and my word for it, you need never fear the fiercest winds that blow. They will not be killed, or even scarcely shaken. I have a young orchard of fourteen hundred trees, on a high swell of prairie, 650 feet above the Mississippi, entirely unprotected, save by the winds, that is a perfect picture of health, vigor, and hardiness, and I should be very unwilling to have my “ventilators” closed. Respectfully yours,

D. W. ADAMS,

Waukon, Allamakee County, Iowa, Aug. 7, 1863.

[We are obliged to Mr. Adams for his very interesting communication. If others at the extreme Northwest, who have had some years of experience, would furnish information of a similar kind, much knowledge would be accumulated that would be useful to the beginner. Our list was made up by a comparison of the climate, as far as we understood it, with the habits of the trees. We are glad to know that your experience can give it some kind of endorsement. We shall be glad to talk grapes with you ever so many hours. We agree with you that letting trees branch from twelve to eighteen inches from the ground is an admirable protection. Still, such shelter as we call for we think

very much needed, even with you, unless there is something very peculiar in your climate that we do not understand. If you read our remarks on shelter in the “Hints,” you will find we enter a special caution against *still air*. Shelter so arranged as to prevent motion in the air is in many respects an evil. We shall recur to this subject hereafter. We shall be glad to hear from you again.—ED.]

MR. MEAD:—Permit me to ask you a few questions through the columns of your valuable HORTICULTURIST.

1st. Has experience proven that certain varieties of pears that will not do well on the quince, as the Bartlett, Sheldon, &c., will do well when “double worked.” Both opinions are held here, and I would like to know from you, who, undoubtedly, really does know.

2d. Buds, here, when inserted close to the ground, are often winter-killed. Would drawing the earth up around the trees, so as to cover the buds, be a protection in winter? Straw, or similar substances, we cannot apply, as the field mice are very troublesome.

3d. I have been trying for three years to raise Sea kale, without success, the plants all dying after bearing seed the second year. Perhaps I have not got the right plant, but some other kale. It resembles none I have seen before, however.

My experience in plowing orchards coincides with your own. I set out about one hundred peach trees this spring, and have cultivated them more than my corn; they have made a growth of three or four feet. Some of my neighbors planted of the same lot of trees in sod; theirs have grown from three to four inches. I have observed nearly as great a difference in the apple orchards in favor of the plowed ones. But, say the advocates of sod, and no cultivation, your fast-growing trees will die the first hard winter. This I can not believe, as the young wood is hard and solid, far more so than the wood of the slow, mossy, uncultivated tree. What say you, Mr. Editor? I have been in the habit of stopping all the young shoots of my pears, peaches, and cherries, by pinching off

the ends, in September, of those that had not stopped growing naturally themselves. What think you of the practice? Is it beneficial, or otherwise? But, I fear I am encroaching on your valuable space and time, and must close. I take a great interest in every green thing that grows, and devote most of my time to the orchard and nursery, (private nursery,) and also to the horticultural journals of the day, without which I could not get along.

Yours very respectfully,

J. T. NATHURST.

*La Porte, Indiana, August 10, 1863.*

[1st. Experience has proved that any pear may be grown on the quince double worked. There ought now to be no difference of opinion on this point. 2d. Some dry earth drawn up over your buds will afford the needed protection. 3d. We are glad to find somebody, at last, who grows Sea-kale, one of the greatest delicacies of the vegetable garden. We have often been surprised that it is so little known, and have several times been on the point of writing an article on its culture. This we must now do. We can not account for your want of success. The plant, however, should not be allowed to seed. It is very gratifying to have so many agree with us on the subject of cultivating orchards. We say that you will not lose your trees half so soon as your neighbors who pursue an opposite course, if they will allow us to say so. Your practice of pinching helps to mature the bud, and is quite proper. We shall always be glad to answer your questions.—Ed.]

EDS. HORTICULTURIST, GENTLEMEN:—If convenient, will you please give me your opinion (in the next number of the HORTICULTURIST) of Bright's method of cultivating the grape in vineyards; that is, allowing the vines to bear in alternate years.

By way of experiment, I planted one hundred vines, including the following varieties, viz.: Concord, Delaware, Rebecca, and Diana. These have succeeded remarkably well; being trimmed to single canes, fastened to stakes six feet in height. This being the third summer, I have allowed every other vine to bear

a moderate crop of fruit. The alternate vines were cut down to two eyes in the spring, but are now about twelve feet in length, as I have not stopped the end of the cane, being fearful of starting the buds. The laterals have been well pinched in. I do not at present perceive any objection to this system; but as it has not been advocated in the HORTICULTURIST, or in any other horticultural paper which I have seen, there may be some objections which do not now occur to me. I will, therefore, be obliged to you, or to any of your correspondents who can offer any information upon the subject, as my vines are now in such a state that any other method of trimming may easily be adopted, which may appear preferable to the one I am now pursuing. Bright's system is, I think, more simple, requiring less attention than the Ohio or Bow method of training the vine. I am,

Very respectfully, yours,

CLERMONT LIVINGSTON.

*Clermont, Tivoli P. O., N. Y., Aug. 8th.*

[It will perhaps be sufficient to say that Mr. Bright has publicly abandoned this system of training the vine. The difficulties connected with it do not really begin until the vines are some four or five years old. After the first vigor of the vine has spent itself, this constant and violent cutting back soon enfeebles it, and the life of the vine gradually wears away. While the vine is in vigor there is constant danger of the buds breaking, entailing a loss of the crop of fruit. In short, the vine will not bear the close restraint and violence called for by this system, even when grown in a pot. There is always danger, too, of the vine shedding its fruit. There are other systems, moreover, quite as simple and as easily managed, in which these difficulties are avoided; that, for instance, which we are at present describing in our "Hints." About the only chance of success in Bright's system would be to plant the vines three feet apart each way in a rather poor soil. We like to see new things tried, and, therefore, would not discourage you from growing a few vines on this system; but we would advise nobody to plant a vineyard in this way, because we can see nothing but ultimate failure. We

have tried the experiment of keeping vines within very narrow limits, and failed, and we do not believe success is possible in the vineyard. Besides, there is no reason why the vine should yield nothing for a whole year. We can give you deeper reasons, if you would like to have them.—Ed.]

MESSRS. MEAD & WOODWARD,—Can you or any of your correspondents tell me whether the Rhododendron will thrive on limestone soil under any circumstances, or not? I have made the attempt on two different occasions, and both have proved failures. In each case, the plants grew well the first season; the second season they became sickly, and made but feeble growth; the third year they died outright before harvest. They were well planted, in good soil, and well taken care of.

If the Rhododendron will not do, will the *Kalmia latifolia* do, as they appear to be of the same genus, having, at least, some affinity for each other. I do not know what else to attribute my want of success to, but soil unsuited to the wants of the plant.

Those only know who have made the experiment with plants of so much beauty, what the disappointment is of an entire failure after they have taken every care possible, under circumstances quite flattering, at first, of entire success. But, as every thing is subject to casualties more or less, it is yet possible that soil is not the only cause of my disappointment.

Very respectfully,

E. MANNING.

*Harrisburg, Ohio, Aug. 3d, 1863.*

[We know of many cases where the Rhododendron is growing in a limestone formation; so that this will not account for your failure. The Rhododendron delights in a soil rich in vegetable matter, and this can be supplied artificially. If you will state the composition of your soil, exposure, &c., we will try to help you grow this magnificent plant. Let us know, also, what species or varieties you planted. The *Kalmia* is easier to grow than the Rhododendron, and is a very beautiful plant. These two plants do not belong to the same genus.—Ed.]

MESSRS. EDITORS,—“To be or not to be, that is the question.” Shall I cut down my cherry trees, and make no further attempt to grow them, or try again? Several friends here have given up in despair, and will not suffer a cherry tree to grow on their grounds.

For the last three or four years the trees have been infested by a black fly or aphid, during the months of May and June, and later on they are attacked by what I am told is the pear slug, which latter pest completely destroys the foliage, and renders the trees disgusting objects, either to sight or touch. What shall I do? Can I keep off the enemy, or must I condemn the trees? G. H. B.

*Madison, Wis., Aug. 13th, 1863.*

[You must not give up the Cherry trees; never succumb to an aphid or a slug. The Gishurst Compound will take off the aphid, and a little dry dust will “do” for the slug. But your neighbors must unite with you, if they have trees. If you will go at it in good earnest, we will give you the particulars.—Ed.]

MR. EDITOR:—Please let us know in your answers to inquiries, whether the Delaware grape can be successfully propagated by Chinese layering. Also, the best way of cleaning a nursery of the woolly aphid, when seated among the roots of the trees. Has rhubarb—where you desire to propagate any particular variety—to be continued by partings from the roots, or can any reliance be placed in the seed? An answer to one or all will much oblige

Yours,

JESSE GORSUCH.

[The Delaware grape can be propagated by Chinese layering, if we understand you rightly; but you will get much better plants from eyes. The only application we know of that will destroy the aphid at the roots of your trees is a strong solution of lime water, repeatedly applied. The Rhubarb must be propagated by dividing the root, if you wish to preserve the kind. No dependence can be placed upon seed.—Ed.]

MR. EDITOR,—Will you allow a young horticulturist to make an inquiry or two, in

hope of receiving an answer through your columns? The reason why I propound my questions to you is, that, from my short acquaintance with the *HORTICULTURIST*, I have learned to consider you good authority. 1st. I am at a loss to know what to do with the shoots of my grape vines, which are allowed to grow without checking, with the exception of stopping the laterals. My vines are young; (this is their first bearing season;) some of them are trained on a trellis and some on stakes. The shoots that are not stopped grow to the top of the stakes, and thence down to the ground, some of them being more than 20 feet long at this date, (Aug. ..) Some of the shoots hanging thus exposed are broken by the winds, which causes such an exuberant growth of laterals that I scarcely know what to do with them. With those vines trained on the trellis the case is not quite so bad; as I can train them along the top of the trellis. But when I get the end shoots, left for the prolongation of the arms, together with the shoots marked *i*, *k*, in your Hints, left for safety valves, all along the top of the trellis, they appear to me to be too thick to thrive.

2d. Can you give us a few concise directions as to the *modus operandi* in making wine in time for the vintage of this season?

I do not wish to anticipate any thing you may have intended to give us on this subject in your Hints; but wishing to try my skill at wine making this season, (in a small way only), I apply to you (in preference to every other source) for some information.

3d. May not fruit trees prove abortive from having exhausted themselves in producing blooms? And would picking off some of the blooms in such cases be followed by good results? Instances of failure have come under my notice that I could attribute to no other cause but blooming too freely.

Before closing I must add a mite of my experience, by way of caution to inexperienced cultivators, not to allow their young fruit trees (more especially Dwarf Pear trees) to overbear. Last season I allowed about a

half dozen dwarf pear trees (Louise Bonne de Jersey) to bear more than I thought would be really good for the trees. This season my folly is apparent from the fact that you can now point out every tree that was allowed to overbear. They look sickly, and are making but a feeble growth; whereas other trees all around them with the same culture are growing finely. But I must not longer trespass upon your limits.

An answer to the above inquiries will very much oblige,

G. H. MILLER.

Norwich, Ohio.

[We are never more pleased than when answering the inquiries of young horticulturists. When we get to be an old, gray-headed man, it will be so delightful to have scores of these young men calling us their "father" in horticulture. To beginners, above all others, belongs the privilege of asking questions. 1st. You will find your first question answered in our "Hints" for the present month. Where stakes are used, we may add, in addition, that the principal shoot, after it has taken a decided downward tendency, may be loosely tied to the stake again, and one of the top laterals allowed to grow with a little more freedom. The object to be kept in view is to give no violent check to the growth till the wood begins to ripen, when the principal shoot may be broken down, as noted in the "Hints." The trouble you now experience is only a temporary one, and will lessen very soon, unless you overstimulate your vines, a point to be carefully avoided. 2d. It would be difficult to give very concise directions for wine-making that would be satisfactory. If we can not get them in the present number, we will write you soon by mail. 3d. There can be no doubt that fruit trees are injured by a superabundance of bloom, and benefit would ensue from thinning out. If thinning out the fruit were annually practiced, the average annual amount of fruit would be greatly increased. Your caution is a very proper one.—ED.]

DEAR SIR,—I have for many years cultivated the grape, in a small, amateur way, and with good success until lately.

Last year, about this time, the leaves on all the different kinds began to decay, and before the ripening of the fruit they were nearly all destroyed, and of course my crop was lost. The Concord, however, was an exception, its thick, tough leaf, resisting the attack sufficiently to save the fruit, and I had a large crop from it.

I attributed this destruction of the leaves to the thrip, of which great numbers were constantly on them. The same trouble is again showing itself on my grape leaves. I now am inclined to doubt if it is the thrip, chiefly because I have noticed that this insect attacks the *young shoots* and *leaves* on other plants; as, for instance, the Glycene, which it effectually prevents making any considerable growth, by destroying the shoots as soon as they appear; and that the oldest grape leaves are those which suffer most, and, in fact, are the chief objects of attack, while the young shoots are not disturbed.

If this matter progresses, as it did last year, (which is more than probable,) I will again lose all my out-door grapes, and my neighbors are about in the same category.

With this dreaded result in prospect, and without the knowledge of any remedy, I take

the liberty (which please pardon in an old subscriber to the HORTICULTURIST) to inclose you several of the affected leaves for your examination, in the hope that you can suggest a cure.

One of the leaves is healthy, and I send it on account of its being covered with a sort of spider web. There are many such on some of my vines. I have selected leaves in the different stages of destruction, and from several kinds of grapes.

Yours truly,

N. H. RIDGELY.

Springfield, Ill., Aug. 8, 1863.

[The leaves sent are affected by the thrip; there can be no doubt about it. Make a solution of old yellow bar soap, and add a handful of lime to each gallon. Use warm water. If you have no bar soap, use common soft soap; but be careful not to get it too strong. Let the solution settle, and then syringe the vines with it freely, especially on the under side. Repeat the syringing several times. We have already explained this to you, but repeat it here briefly, since the thrip is getting to be a very common nuisance in the vineyard. Dusting the vines with lime, or lime and [sulphur, early in the season, keeps the thrip down to a moderate number. The healthy leaf is in a normal condition.—ED.]



# THE HORTICULTURIST.

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VOL. XVIII.....OCTOBER, 1863.....NO. CCVIII.

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## Hints on Grape Culture.—XXX.

IN our last the vine was left at the end of the third season, at which point we resume the treatment. In order to make the subject as plain as possible, we have prepared a portrait of a vine just as it looks at this time, except that the canes have been cut off at the end of the stakes. The drawing is on a scale of one inch to the foot, the largest scale that our page will admit for a vine six feet high. In this and some other cases, it is desirable to give a "full-length portrait" on a reduced scale, in order that the reader may get a proper conception of the subject as a whole. Buds and other parts of the vine we can give of about the natural size, and this is necessary in order that the details may be understood. The two together, we think, will make the subject quite clear. By referring to *Fig. 1* the reader will see the vine at the end of the third season, with the canes cut off at the top of the stakes. This figure we shall have occasion to use again, but it will do no harm to give here the references to the letters. *a* is the trunk of the vine; *b* and *c* denote points where buds have been rubbed out; *d* is the point where the arms cross, and where they are to be tied till the arms are set; *e* and *f* denote the arms, and also

points where buds have been rubbed out; *g* and *h* are the canes made by last season's growth.

Having made these explanations, let us now turn to the pruning, which, in this system, is a very simple matter indeed. The cane *g* is to be pruned at the dotted line *i*, or at the base bud. It is all removed at one cut. If the cane *h* consists of good stout wood up to the top of the stake, it is to be pruned at that point. If otherwise, the cane must be cut shorter; that is to say, the cane, whether left two or six feet long, must consist only of good stout bearing wood. The pruning of this cane the present year must be strictly in reference to its size. There will after this be no difficulty in getting a full length cane of the required stoutness. The vines having been thus pruned, are ready for their winter repose. Wherever covering is necessary, it should be done on the approach of the first freezing weather.

The spring treatment of the vineyard, in regard to uncovering, plowing, etc., will be precisely that heretofore directed. We will suppose every thing of this kind has been done, and the vines tied to the stakes at the beginning of the fourth year. *Fig. 2* shows

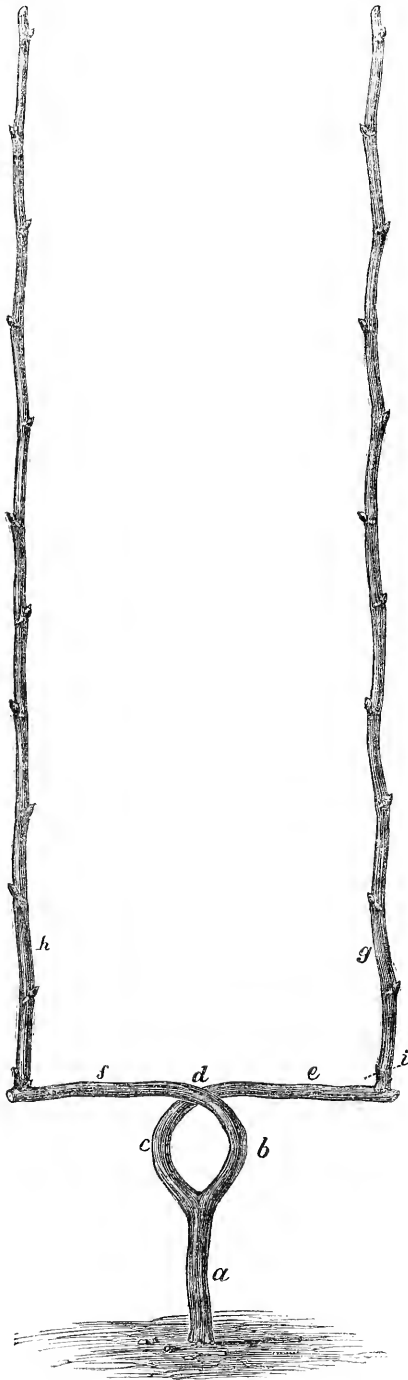


Fig. 1.

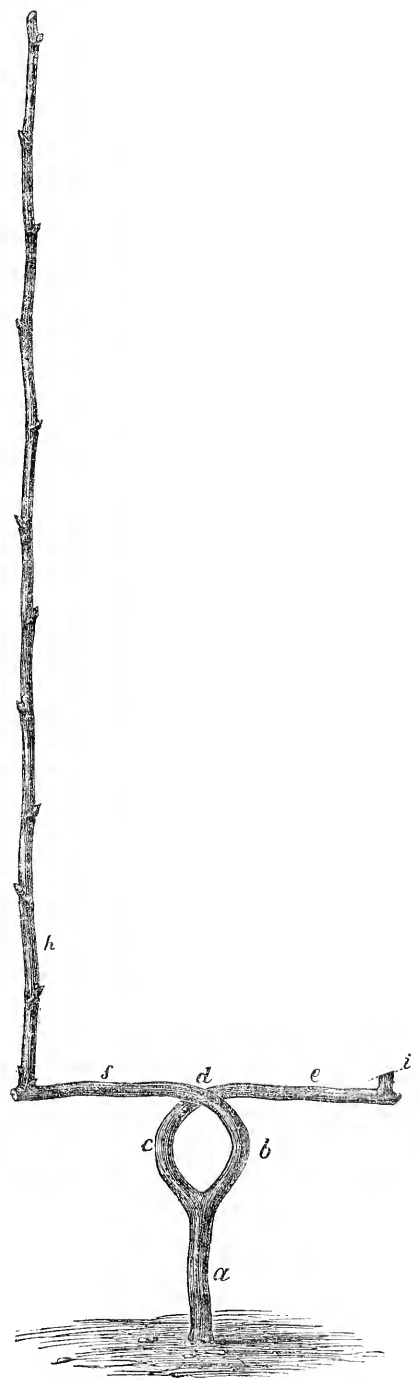


Fig. 2.

the vine as pruned. From the arm *e*, at the point *i*, will proceed two or more shoots. The strongest of these must be selected, and the others rubbed off when about three inches long. It will generally be safe to select the lowest shoot; and it is always best to select this, except when it is quite weak. A large proportion of the strength of the vine being directed to a single cane of this kind, it will usually grow very stout. This cane must be tied to the stake as it grows, and the laterals pinched in, as heretofore directed. When it has grown a foot or so above the top of the stake, the end may be pinched out, and treated as directed last month. This cane may be allowed to bear two bunches of fruit. It is intended to be fruited next year to the top of the stake.

Let us now turn to the cane *h*. We will suppose it was a stout cane, as it should have been, and was left the full length of the stake, as shown in *Fig. 2*. Our object is to fruit this cane its whole length. In order to have the fruit set as well at the bottom as at the top, it will be necessary to bend the cane down in the form of a bow, which is readily done by temporarily tying the end to the stake of the next vine. It is but a moment's labor to do this, and it is well repaid by the additional weight of fruit. If this is not done, the fruit will not usually set well on the lower part of the cane. When the young shoots have grown about three inches long, the cane may be tied in its proper place. Each eye should set three bunches of fruit; we have had the Delaware set six; but it would not be prudent to let all these bunches remain this year, as it would weaken the vine, and injure its productiveness for the future. Whether one or two bunches should be left on, must depend altogether upon the condition of the vine. If it is in the best condition, with a stout cane, two bunches may be left; otherwise leave only one. Vines are often ruined by being allowed to overbear while young. It is very hard for the novice to perceive the necessity for removing so many fine bunches of fruit;

yet we can assure him that this necessity is absolute, if he would preserve the future well-being of the vine.

As soon as four leaves have been developed beyond the fruit, pinching in must be begun. We prefer to begin thus early, because, by simply pinching out the end, we are less likely to disturb the equilibrium of the vine, than when we pinch off a portion of the shoot with several fully developed leaves on it. Besides this, the labor is less, and the results much more satisfactory. Every shoot on this cane must be thus pinched in. The laterals must also be pinched in. As soon as the second leaf has attained the diameter of an inch, pinch in the lateral to the first leaf. After a while the lateral will make a new growth; when the third leaf is an inch in diameter, pinch in to the second leaf on the new growth; and when this breaks again, pinch in again to two leaves, as just directed. There will thus be *one* leaf on the first growth of the lateral, and *two* leaves on each subsequent growth. All the laterals on the cane *h* must be treated in this way, and the pinching must be continued till the third week in August, or the second week in September, according to locality and the time at which the grape under treatment ripens. All this pinching may seem to the beginner very laborious, but it is by no means a formidable matter if done at the time directed. If neglected too long, it becomes quite a serious undertaking; but there is no help for it.

This early pinching has several advantages, which may be here alluded to. By keeping the bearing shoots short, it saves much time and trouble in tying up; it produces a better development of the leaves and fruit; it offers no violent shock to the root action of the vine; and results in greater constitutional vigor and health.

The reader will perceive that this system of training is established at the fourth year; yet the pruning for the fifth year, and a few other details, may very well form the subjects of another article.

## COUNTRY HOMES.

BY MEAD AND WOODWARD, ARCHITECTS, ETC., 37 PARK ROW, N. Y.

WE give this month a somewhat different example of Cottage Architecture, (Fig. 36,) of a form that is compact and every way available, at the same time affording every convenience in the arrangement of rooms desirable for a family of refined tastes and moderate

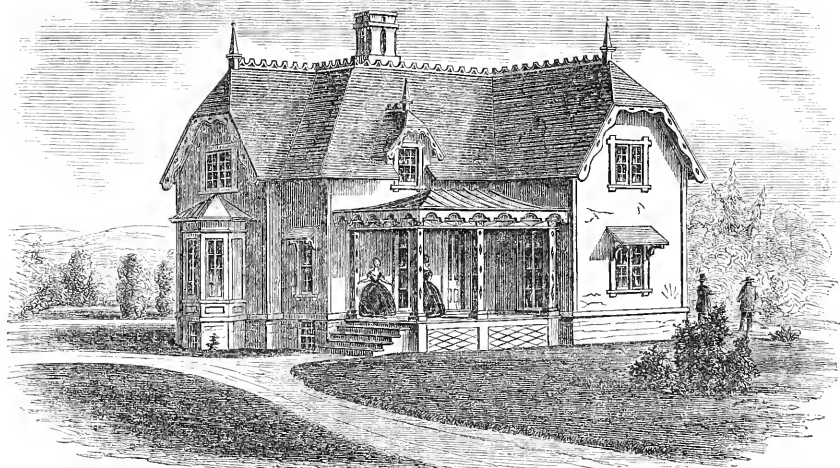


FIG. 36.—Perspective.

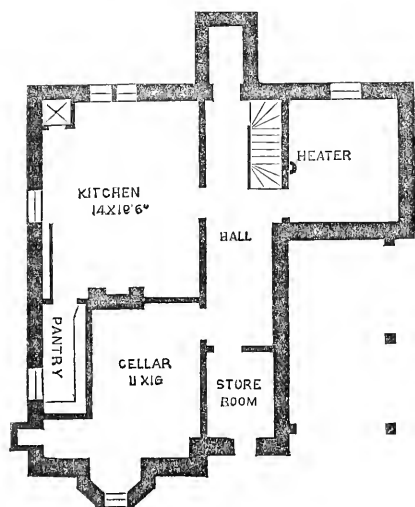


FIG. 37.—Basement Plan.

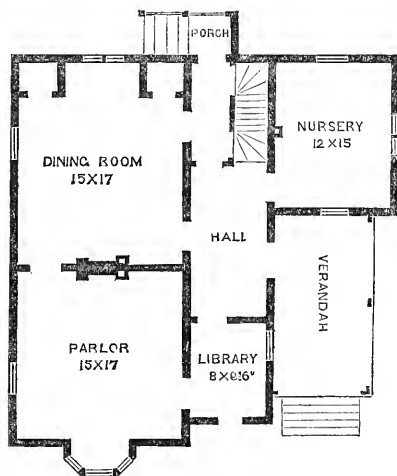


FIG. 38.—First Floor.

means. This cottage may be built of wood, or, better still, in favorable localities, of brick

ner that the whole combination impresses all with harmonious beauty, and not, as is too frequently the case, seek to make up the wretched deficiencies in the grounds by elaborate expenditure and display about the house. A true appreciation of country life will not tolerate slovenly, ill-kept grounds, and no house exhibits its true value unless there is a harmony in its surroundings. If this be attended to, a high degree of effect can be produced in houses of very moderate cost; houses that shall be roomy, warm, substantial, and in every way agreeable to their occupants.

The plans show the arrangement of rooms, and these can be made larger or smaller, or be differently disposed, to suit almost any fancy. In this design the kitchen apartments are below stairs; in future plans we shall give some with kitchen, laundry, etc., on the principal floor; or they can be

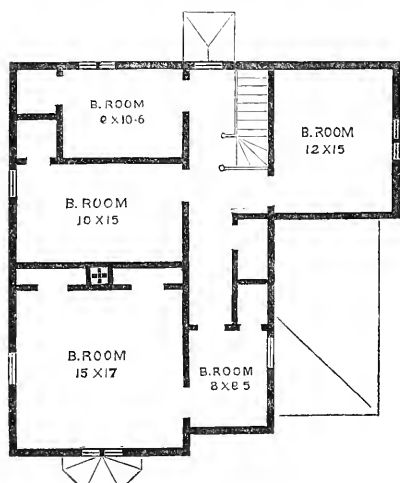


FIG. 39.—Second Floor.

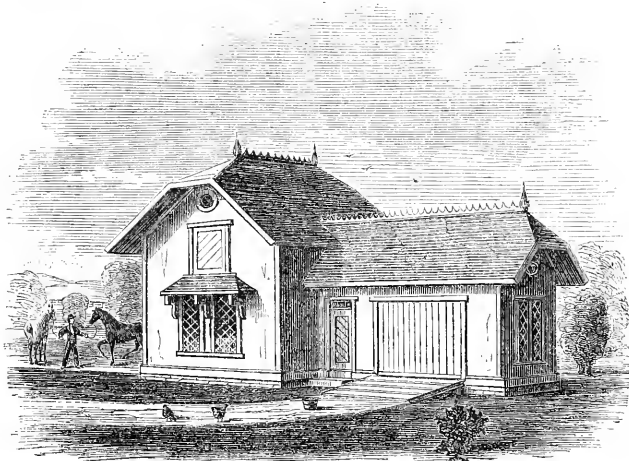


FIG. 40.—Stable.

or stone, and if suitably surrounded with tasteful landscape embellishments, will make a snug, pretty, and attractive home. One can, by the exercise of appropriate taste, produce the right kind of an impression in a house of this character. It should become a part of and belong to the acres which surround it; it should be an indispensable accessory to the place itself, and the grounds should be laid out and embellished in such a man-

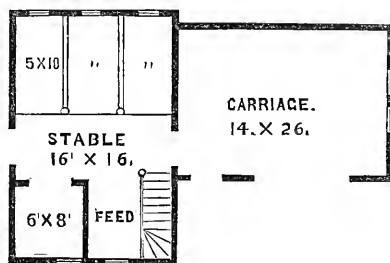


FIG. 41.—Stable Plan.

readily added to this plan. The cost of a house is the one thing desirable; every one asks for it, and yet every one within our knowledge who has built a house himself at a stated price has been sadly deceived. Close specifications are very dry reading, and not appropriate here, and it is questionable how much service they would be to any but professional builders. We will contract to build this house complete in any favorable locality, of wood, to be a strong, substantial building, well finished, for the sum of \$2,700. It is reasonable to suppose, that if one without building experience undertakes it, he will have to pay something additional for the knowledge he will gain. If he places it to the proper account, then we can not be accused of misleading him.

Most men contemplate, at some period of life, the construction of a dwelling-house, but few deem it necessary to study their wants or prepare their plans until they have selected their site and made all other arrangements for building, and then proceed with all possible haste to plan a home. That which should have been the study of months or years, is hurried through in as many days, imperfectly done at the best, and the cause of frequent annoying and expensive changes after the work has commenced. It is true, that the site has very much to do with the distribution of rooms, but any ingenious architect can readily adapt a proper combination of rooms to suit the exposures and views of a particular site. It would be vastly better for those who prefer to arrange their own plan of rooms, (and there are but very few who do not,) that they take abundant time to consider well every thing relating to them; and although the hope of building may be very remote, it should not be considered time lost to begin to give one's thoughts a definite form of

what he thinks a house should be; for if nothing else results, it may furnish a valuable hint for a friend, and will certainly enlarge one's information and experience in these matters. Almost every one is capable, with such hints as have been freely given in all the volumes of the *HORTICULTURIST*, in the leading papers which treat on rural art, and the numerous valuable publications on rural architecture, to make such a combination of rooms as will best suit his peculiar wants, tastes, or fancies, and then, with the aid of an architect, it can readily be freed from mechanical impracticabilities, and put into a proportionate and harmonious form. Architecture, both in design and construction, is a profession that requires long years of study and practice to develop an expert, and those who really want a good thing at the least cost, usually seek such assistance; those who prefer to do their own designing and building, find out with absolute certainty the most expensive modes of erecting very ugly and ill-proportioned structures.

We are glad to see the favor with which these articles are received; always a prominent characteristic of the *HORTICULTURIST*, they are still called for with undiminished interest. Our arrangements are such that we shall continue them monthly, and increase their number and variety, that each volume of this magazine may not only be the most superbly illustrated work on Horticulture and the elevated pursuits of country life, but a valuable work of reference on Rural Architecture.

Fig. 40 is a design for stable and carriage-house for three horses; harness-room, feed and carriage-room, with hay-loft above. It is well lighted, ventilated, and comfortable, and can be built for \$450.

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### THE STANWICK NECTARINE.

BY THE EDITOR.

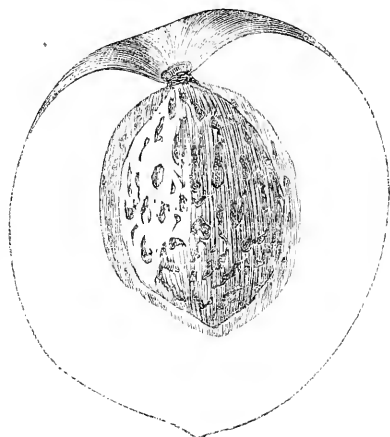
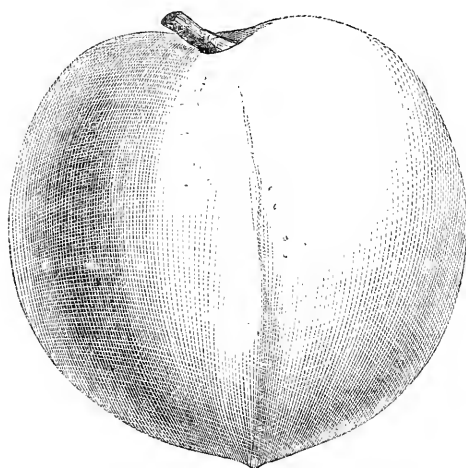
We are indebted to Mr. Pullen, of Hightstown, N. J., for very fine specimens of the Stan-

wick Nectarine, of which we have prepared a very good portrait, herewith presented to the

reader. The perspective and outline were taken from different specimens.

*Size*, large. *Form*, roundish oval. *Suture*, faint. *Color*, yellowish green, finely mottled

The Stanwick has been introduced several years, but is comparatively little known. Its fine quality should make it a popular favorite. The tree is as hardy, we think, as the Boston



THE STANWICK NECTARINE.

and sprinkled with dark crimson, with a dark crimson cheek. *Flesh*, white, tender, juicy sweet, with a delicious vinous flavor. *Pit*, medium. *Quality*, best.

or Elruge, while in quality it is better than either. The best way to grow the Nectarine is on a trellis.

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## NOTE ON MILDEW IN GRAPE VINES.

BY PROF. B. SILLIMAN, JR., NEW HAVEN, CONN.

EDITOR HORTICULTURIST, — Every careful observer is in duty bound to add his mite of observation and experience upon the troubles of horticulture, if he can thereby aid at all in removing or ameliorating them. For this reason, I send you a few facts and notions which have come to my knowledge on that most troublesome pest of the vine, *mildew*, which this season, more than most, has been abundant and destructive.

Mildew is a *fungus* whose growth seems, in most cases, to be connected with some arrest of growth, or actual debility in the plant on which it appears. Much has been written and said respecting mildew, as to whether it was a *cause* of disease, or itself the *effect* of

an abnormal state of the plant suffering from it. I am quite prone to adopt the latter view from such information and observations as I have been able to gather. Nor is it by any means unimportant which view is adopted, since all rational measures taken for its cure must rest upon our first determining this point.

I have carefully watched the development of mildew, especially during the past three years, in which I have been cultivating the new and old varieties of American grapes—in the open air, of course. My observations warrant the following conclusions, which I believe are essentially the same to which others have arrived.

1st. While all our native varieties of grape vine are open to the attacks of mildew, some are much more subject to it than others. This is, however, a liability, I am quite persuaded, which has much to do with the locality. Thus, Allen's Hybrid has been the first vine, with me, to develop mildew; for three successive years it has shown it as early as June 10th. But I notice a correspondent of yours, in a late number, counts it as one of the vines most exempt from mildew. This variety, however, *suffers* less from mildew than many others, owing apparently to a very robust, vigorous sort of foliage, which is able to carry a good deal of mildew, and still ripen its fruit. It is certainly one of the best and most desirable varieties of out-door grape which I have in cultivation.

2d. Mildew is induced chiefly by cold, when this cause amounts to a check in the growth of the leaf. Nocturnal radiation during our clear still nights will often lower the temperature on the surface of leaves below 45°, while in sheltered situations the temperature of the air at the same time is above 50°. Experiments with a delicate self-registering thermometer are wanting to determine exactly the difference here indicated, but it is certainly a considerable quantity, and can not be much less than that shown between the dry and wet bulb thermometer. It often happens that in hot, dry weather by day, we have cold, clear nights. Such times, I have observed, are peculiarly favorable to the primary development of mildew; much more so than warm and damp and cloudy weather, which is commonly esteemed the state of weather most favorable to this pest.

It follows, from what has been said, that mildew should be held in check, or its development prevented, by any cause which will arrest, in a degree, nocturnal radiation. The following case will illustrate this point: On my house is a Catawba vine, now over twenty years old. It covers an open space in face of a piazza, 21 feet long and 12 high, above which is a cornice projecting rather over a foot beyond the wires on which the vine is trained. The exposure is west by north; and although it is late in the morn-

ing before the sun rests upon it, this vine has very uniformly ripened its fruit, and has never (on the portion described) been affected with mildew to any noticeable extent. Three years ago I carried some strong shoots of this vine over the cornice, with a view to transfer the chief growth of the plant to a new trellis, which I constructed, reaching from the edge of the piazza roof to the top of the main house, at an angle of 45°, above a tin roof. Here, I thought, was an exposure so much more favorable than the old one, that the fruit would be much more fully and more early ripened; and as the strength of this old plant seemed equal to it, I proposed to remove all the old branches on the lower trellis, and supply their place by new plants, while the new trellis above should be covered by strong new shoots trained in horizontal cordons. To my surprise, I find my plans do not meet the approbation of the old Catawba; in fact, he quite resents this proposed change. All the branches which I have brought up over the roof are badly mildewed. At this time (Sept. 14) but few leaves on the vertical surface of the old trellis, under the cornice, show a trace of mildew, while above the roof the exact reverse is true. Few of the berries fell off with brown rot (of which more anon) from the vertical surface, while over the roof this trouble was much more general. In short, to view the vine at a distance, the part above the roof seems as it were scorched by a fire, while that below the cornice is as green as it was in June. The fruit on the portion fully exposed to the sun is likely to fail in good part from the loss of foliage, while on the protected part there will be a good crop ripe in October.

The plain inference from this, and many similar cases within my observation, is, that the vine must have some protection from nocturnal radiation. Conversing lately with Mr. Saunders, the intelligent and well-known gardener to the Agricultural Bureau at Washington, he informed me that he had recognized these facts in his American experience, and had in your journal advised the use of trellises with roofs, made of two boards projecting like the eaves of a house, not more



than ten or twelve inches. I do not know that any one has tried this simple and obvious plan, but I propose to do so the following season. In the French treatises on vine culture, walls with projecting eaves are constantly represented. In this country vines on walls and close fences certainly do not do nearly as well as those on open trellises.

But little study has been given by botanists to the investigation of mildew. In fact, Dr. George Engleman is the only botanist whose papers I have seen on this subject. In the Transactions of the Academy of Science of St. Louis, vol. ii., 1863, Dr. Engleman, the President, describes two species of *Fungi* destructive to vineyards, (p. 165.) I add an abstract of Dr. Engleman's short note on this interesting subject for the information of your readers. Dr. Engleman describes first a species of *Botrytis*, probably *B. viticola* of Berkley. It makes its appearance in the latter part of June, on the lower, downy surface of the leaves of the Catawba variety of *Vitis labrusca*, (which is the only variety extensively cultivated near St. Louis,) forming irregular confluent spots. This is, undoubtedly, the same species which infests the lower surface of the other varieties of the grape. About the same time the mildew appears on the pedicles, and often also on the young berries when they are about the size of peas or smaller. Dr. Engleman never saw it in full grown berries. Those attacked on their surface, or on their pedicles, soon fall off; but the most material damage is done by the mildew infesting the leaves, whereupon the greater part of the berries will gradually turn yellowish brown at their base, shrivel from that point, assume a club shape, and at last dry up entirely, usually remaining adherent to the withered racemes. This is the *brown rot*, so well known to all grape cultivators, to their dismay.

The second kind of rot—the *black rot*—is brought on by a very different fungus, which Dr. E. thinks is undescribed by botanists. It evidently belongs near Ehrenberg's genus *Nemaspora*, and ought to bear the name *ampeliciida*. It makes its appearance only

on nearly full-grown berries, exhibiting in the first stage a discolored spot on the side, but never at the base of the berry, about 2 lines in diameter, with a dark spot in the center. This spot soon becomes light brown, and remains so, while the surrounding part of the berry gets darker, and exhibits a rough, or, (under the magnifier) pustulous surface; gradually, now, the berry shrivels up and becomes black. The individual fungi are little spherical bodies, (0.07—0.10 line in diameter,) formed under the surface in great numbers, which, growing, elevate, and at last burst the epidermis, then open at their apex by a small, jagged hole, and, shriveling with the berry, eject a more or less curled or twisted thread, which, moistened, becomes gelatinous, and shows the innumerable oval sporules, (0.004—0.005 line long,) each imbedded in its coat of mucilage.

These kinds of fungi are found either on distinct vines, or sometimes on the same vine; they are very rarely seen on grapes cultivated in yards and in houses, but are very common, not to say universal, in our gardens and vineyards, in some seasons more so than in others. It is said that vineyards further north, *e. g.*, in Northern Illinois, are free from these pests. Whether other diseases assist in the destruction of the grape, as vine-growers will have it, Dr. E. can not, from his own experience, determine. He has never seen the *Erysiphe*, which is so destructive to the gooseberry, and to vines in graperies, on grapes cultivated in the open ground. So far Dr. Engleman.

It will be seen that the view presented in this note as to the origin of mildew receives additional confirmation from Dr. Engleman's statement, that this pest is almost unknown on vines in city yards and in houses. I have but a single additional query to make, and this I give with some hesitation, as further observations are needed to confirm it, namely, is not the practice of summer pruning, so general in vineyards, favorable to the development of mildew, from the check it gives to the vine? In one case in my own experience, mildew became much more abundant imme-

diately after a rather severe summer pruning of a lot of Delaware vines. If the laterals are pinched at three or four leaves, and the main shoot is left undisturbed, I believe this evil will be found diminished.

[This is the first time we have had the pleasure of welcoming Prof. Silliman to the columns of the *HORTICULTURIST*. If men of science would occasionally give a little of their time to the study and practice of horticulture, and the seemingly small things pertaining to it, we might hope for some solid additions to horticultural literature, the discovery of important scientific facts, and many ameliorations of practice; for it is only to a happy combination of science and practice that we can look for any rapid and permanent advancement in horticulture. Prof. Silliman has chosen a subject quite as profound and interesting as any that has tasked his ability in the Devonian period. It is a subject to which we have given a good deal of attention, and we shall be only too happy to have the Professor for a co-laborer. His first conclusion, that "all our native grapes are open to the attack of mildew," is undoubtedly true, notwithstanding the statements made to the

contrary. His second conclusion, that "mildew is induced chiefly by cold, when this cause amounts to a check in the growth of the leaf," coincides with our own experience; but this proposition may be extended, and made to include any cause which produces a check in the growth of the leaf, whether that cause be in the atmosphere or in the soil. Cold, however, will be found to enter into nearly all of these causes, in some form or other. That cold is the chief cause may be inferred from the fact that by this means mildew can be induced at will, especially if the vine be growing in a pot. Shelter, too, is a very important matter. The instance related of the Catawba is a very interesting one. The black rot, we may remark, is now getting to be quite common all over the country, and is more to be dreaded than the mildew. We would ask the Professor how far his Catawba is affected by "sun scald." There can be little doubt that severe summer pruning is intimately connected with the development of mildew and rot, the former especially. Our own system of pinching is designed to avoid this. We commend this article to the attentive perusal of all grape growers.—ED.]

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## PLANT HOUSES.—V.

BY THE EDITOR.

WE again have the satisfaction of presenting two examples of Plant Houses; one a *Green-house*, and the other a *Cold Grapery*. The *Green-house* is quite small, being only 20 by 30 feet. It is intended to keep bedding plants, Camellias, and similar things, during the winter, and also to propagate such plants as may be wanted for bedding purposes on a place of moderate dimensions. This house runs east and west. Its position was determined partly by the nature of the ground, but mainly by the propagating bed. *Fig. 2* is the ground plan. The large compartment is nearly twenty feet square. The potting-room, which is at the west end of the house, is eight by ten feet, and is fitted up with desks, drawers, and other necessary conveniences. The furnace pit, at the same end of the house, is eight by eight feet, and con-

tains ample room for coal. The house is heated by two four-inch pipes. The large compartment has a side table for plants. On the north side of the house there is a propagating bed, the bottom heat for which is supplied by a hot-air chamber instead of a tank. This hot-air chamber is formed by simply inclosing a portion of the iron pipes. It will answer the purpose of the owner very well, but is not to be compared to a tank. In the plan there is a large table in the center of this compartment; but this was not put in, the owner adopting the suggestion of setting his large plants on the floor of the house; a very excellent plan in itself, but which was subsequently very much marred by filling in the whole floor of the house to the depth of six inches with coarse pebbles, to the injury, we think, of the subsequent well-being of the

house. The idea was, an appearance of neatness, the preservation of the tubs, and to prevent the roots from running through; but an inch of nice gravel would have secured the

pebbles. The pebbles are unpleasant to walk on, become heated, and dry off the house too rapidly, to the manifest injury of the plants. We merely mention the subject, that our read-

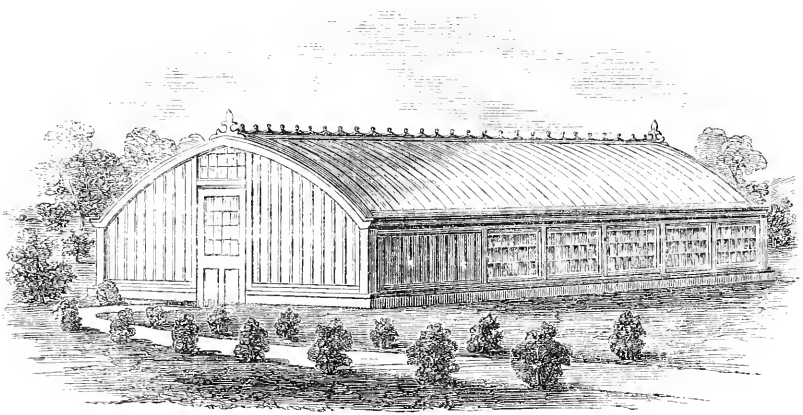


FIG. 1.—Perspective View.

first without the objections that lie against the thick coat of pebbles, while the other objects will not be secured; for the tubs will

ers may avoid a similar error, and save themselves the money thus needlessly spent.

*Fig. 1* is a perspective view of the house.

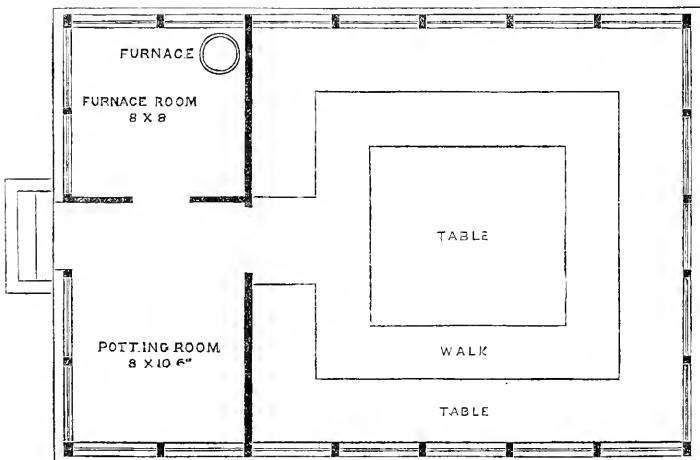


FIG. 2.—Ground Plan.

rot, and the roots will not thus be prevented from running through the pots. This object must be secured by other means than

The west end is boarded with ten inch stuff, and battened. This corresponds with the general design of the house, and presents a

neat finish. The sides, except the potting room, are of glass, the sashes being about three feet high. Every other sash is hung at the bottom, for the purpose of ventilation. The roof is a continuous glazed roof, and is quite flat, which is a decided advantage to the plants within. There are no ventilators in the roof, the top ventilation being effected by means of the sashes over the doors at each end, which are hung at the bottom for this purpose, and afford abundant ventilation for a house the length of this one, and even much longer. There is an ornamental crest along the ridge, and at each end a neat finial. It is what we call a very pretty little house, and, with ordinary good management, can not fail to give the owner a large share of gratification.

Our next example is a cold grapery, built three years since for John Cheney, Esq., of South Manchester, Conn. Having been in operation this length of time, the results can be spoken of with some degree of confidence. This is the house that we alluded to as having been blown a foot from the foundation without breaking a pane of glass, the carpenter having neglected to anchor the sills. *Fig. 1* is a perspective view. The house not being, from its situation, an architectural feature of the grounds, the roof was made straight from economical views; but the curved roof is much the prettiest, and presents great advantages in a better diffusion of light. The roof is a continuous glazed roof, which has many and decided advantages over the old-fashioned sash roof, the latter now only finding favor among a small class who belong to a generation that is passing away, with eyes fast closed to the light of recent improvements. There are no openings whatever in the roof for top ventilation. The house is sixty feet long, and is the longest one that we ever planned without ventilators in the roof. The top ventilation is effected by means of sashes over the doors at each end. We have found these end sashes, in houses not over a certain length, to effect top ventilation in a manner more satisfactory than any other means that we have tried. If neglected, however, when a sudden change in the weather takes place,

the temperature of the house is apt to be reduced too suddenly; but there is no manner of ventilation yet known that does not require watching, and personal attention will always be needed until some self-regulating apparatus is invented; and this we consider so feasible, that we are giving some attention to it. The only other means of ventilation in this house is afforded by the side sashes, every other one of which is hung at the bottom, and opens *inwardly* at the top. In spring and fall, and, indeed, except in very warm weather, these side ventilators need not be much used, the end ventilators being sufficient. The operation is substantially as follows: the heated air, as is well understood, rises to the ridge; the end ventilators being opened, a current is established immediately along the ridge, the heated air passes out at the end, warm air rushes in to take the place of that which has passed out, and thus a continuous stream is kept up, and the whole air of the house is put in motion. The process is hastened by opening the side sashes a few inches. The air from these is admitted at the top, and passes directly to the roof of the house, and thus avoids the ill consequences which are known to arise from the admission of cold air immediately on plants in a growing condition. Whatever may be said about top ventilation, there can be no doubt that it is a grave error to admit cold air from the bottom of a side sash.

In the mode of ventilation under consideration, the only question in our mind is, how long the house may be made without impairing its efficiency. We have found, as the result of trial, that in a long house, the current along the ridge is not readily established; in a short house, there is no difficulty whatever. In admitting air at the bottom of the side sash in the usual way, the moisture of the house is carried off very rapidly; in our mode of ventilation this serious objection is almost entirely obviated. We have no doubt that the popular notions of ventilation are destined to undergo a marked change, and that the conviction will obtain that we must look chiefly to the top of the house for the

means of ventilation. Though convinced of the utility of this mode of ventilation, we usually put in all the ventilators called for by

what we would like to have it. At times, when not watched, the temperature may be reduced a little too rapidly, and there is not always quite so much motion in the middle of the house as we would like; but we think the fountain in the middle of the house is

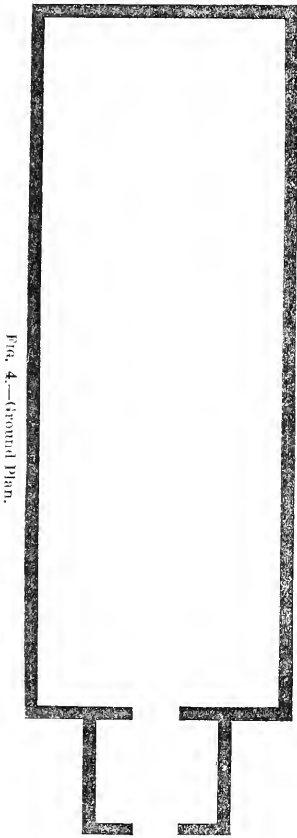


FIG. 4.—(Ground Plan.)

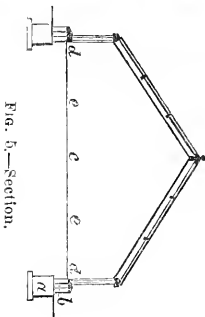
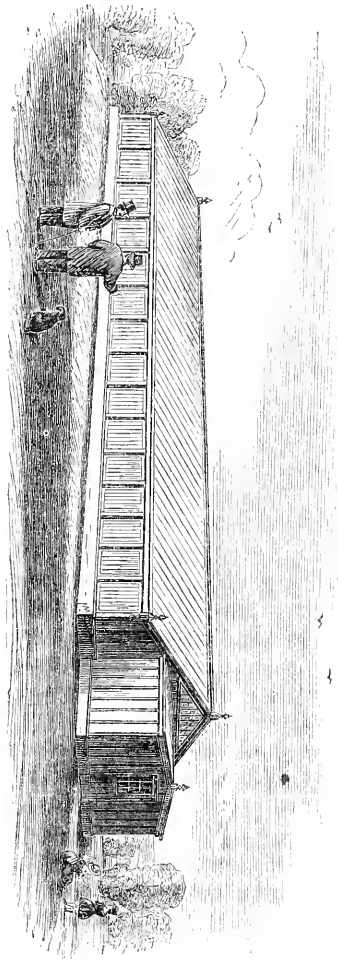


FIG. 5.—Section.

FIG. 3.—Perspective View.



somewhat concerned in this, by condensing the air.

The little house at the north end is not strictly ornamental, but it is very useful. It is used for pots, tools, work bench, etc. It might have been carried to the peak of the grapery, and thus made quite ornamental;

the owner. In the case of intimate friends we use a little persuasion. In the house of Mr. Cheney, the ventilation is pretty nearly

but we wished by all means to avoid covering the diamond shaped window in this peak, which is used as a ventilator.

The house is well built in all respects; the glazing, usually very badly done, in this case deserves to be particularly commended. The figures in the foreground of the perspective are purely imaginary. Mr. Cheney has no children; and for that very reason we thought it would be no harm to throw in a nice little girl and boy: we know that he has room in his big and genial heart for a dozen.

*Fig. 2* is the ground plan of the house, and *Fig. 3* is a section. The house is twenty feet wide and sixty feet long. In *Fig. 3*, *a* is a stone wall, with a drain under it. *b* is a hollow brick wall. *d, d*, is the ground level of the house on the inside; the line below *b* is the level on the outside, but the earth is embanked against the brick wall to within an inch of the sill. The border is about three feet deep, and occupies the whole interior of the house. There is no outside border. On the bottom is placed about one foot of "tussocks" from a neighboring bog, which may in time decay. The border is made up pretty freely of muck, with the addition of sand, loam, charcoal dust, bone dust, etc. There is a row of vines, two feet and a half apart, at each side of the house, at *d, d*. There are two other rows at *e, e*. There are also a few vines at *e* and at the ends of the house. The rows at *d, d*, form fruiting canes half way up the rafters; those at *e, e*, go to the roof with a naked trunk, and furnish fruiting canes for the other half of the rafters. The fruiting canes are thus very short, and easily managed. The house was planted in the month of April with such grapes as Black Hamburg, Victoria Hamburg, Wilmot's Hamburg, Golden Hamburg, Muscat Hamburg, Chasselas Fontainebleau, Frontignans, Muscat of Alexandria, Syrian, Esperione, Muscat of Jesus, Tokay, and some others. The plants were very small, and the wire worm injured some of them so as to make it necessary to replant; but the growth of those not injured was very good. A fine crop of Melons, Tomatoes, Strawberries, etc., was taken from the house the first year. The second year a

few bunches of grapes were gathered, and every thing went on finely. Here we may say, that the house is entirely under Mr. Cheney's own management. Being a man of wealth and leisure, he makes the care of his grapery an elegant pastime, from which he reaps a large crop of health, enjoyment, and fruit. How many wealthy men there are who might profitably follow such an example. When the house was placed in his possession his knowledge of grape culture was meager in the extreme. We gave him the necessary instructions, which he has followed implicitly; with what results will presently be seen. This is the third year in which the house has been in operation. Our last visit was in the early part of August, when we counted 734 bunches of grapes, weighing from one to seven pounds each, the Syrian being the grape which reached the last figure. Almost as many bunches were thinned out. In some cases too many are left, but they look very fine. The Muscats are extremely well set, and some of the bunches will weigh fully three pounds. The Black Hamburgs look quite as well; but the finest show of fruit is on the Esperione, which is quite as good as the Hamburg in quality, and even a better cropper. The large number of bunches is owing to the manner of planting; so many could hardly be taken the third season from a house planted in the ordinary way. The canes, it will be borne in mind, are now only fruited about half their length. Mr. Cheney has much cause to congratulate himself on the results. We are so much pleased with them, that, for the present, we should not make a single alteration in the house. In some respects it was an experiment, and has thus far been eminently successful; and we think it will continue to be so for the future.

The exposure of this house is a very bleak one, and the climate cold and fickle. In order to provide against a late spring frost, a coil of one inch pipe was inclosed in brick work, with a fire chamber under it. From this coil a single one inch pipe was carried around the house next the side sashes. The cost of the whole arrangement was \$21, and it is found to answer the purpose, having on one occa-

sion kept the frost out of the house, when the crop in the house of a neighbor was destroyed. The pipe used was not new. In

many places, some resource of this kind is necessary, and a small boiler with a single pipe will in most cases prove sufficient.

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PRINCE'S ST. GERMAIN PEAR.

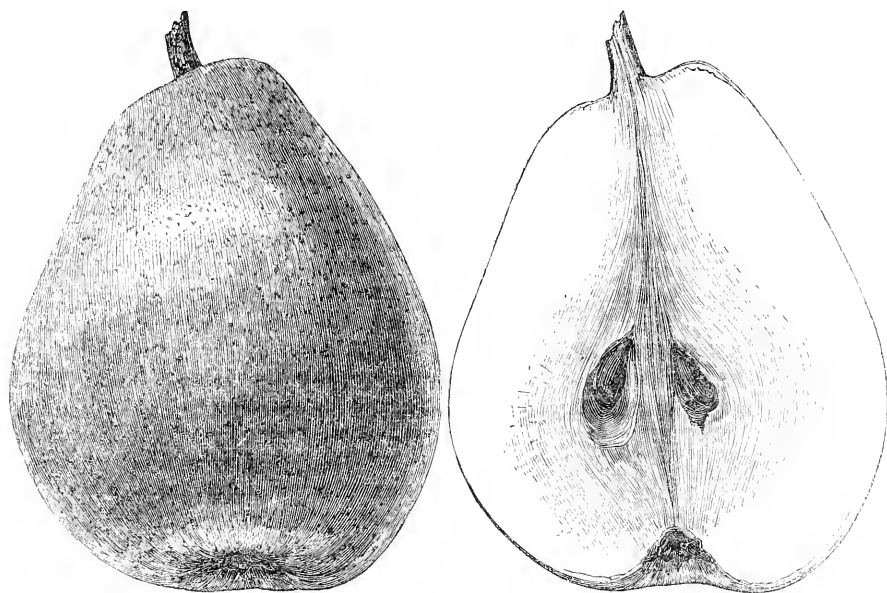
BY THE EDITOR.

Among the winter Pears sent us by Messrs. Ellwanger & Barry were several specimens of Prince's St. Germain, a portrait of which is herewith given.

*Flesh*, yellowish white, a little gritty and coarse, juicy, half melting, with a somewhat vinous flavor. *Quality*, very good. Season continues till March.

*Size*, medium. *Form*, obovate. *Skin*,

This was one of the best winter Pears that



ST. GERMAIN PEAR.

green, covered with russet, with a red cheek. *Calyx*, large, open, set in a shallow basin. *Stalk*, about an inch long, somewhat curved, and inserted in a slight and nearly flat de-

pression. *Flesh*, yellowish white, a little gritty and coarse, juicy, half melting, with a somewhat vinous flavor. *Quality*, very good. Season continues till March. This was one of the best winter Pears that we received from Rochester. It is an old variety that originated at Flushing, and has been in cultivation many years. Many of more recent introduction are far inferior to it.

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OLD *versus* NEW GRAPES—A NOVEL CONTEST.

A discussion having arisen in England as to the quality of new and old grapes, it was finally referred for decision to a committee of

the Royal Horticultural Society, each party, in the month of January, producing his sample of grapes. It is considered an evidence

of great skill in grape growing to produce new grapes on the 1st of January, and it undoubtedly is; but it has been done in this country, and, indeed, it is rather easier to do it here than in England. We hope the following article, taken from the *Cottage Gardener* for January 27, 1863, will stimulate a greater number of our grape growers to produce new grapes in midwinter.

"A special meeting of the Fruit Committee of the Royal Horticultural Society was held on Wednesday last, to decide the challenge offered by Mr. W. Thompson, of Dalkeith, through the pages of the *Florist and Pomologist*, to Mr. Tillery, of Welbeck. Some discussion had taken place between these two eminent gardeners as to the relative merits of old and new grapes, Mr. Thompson having succeeded in producing Black Hamburgs on New Year's day, and he held that new grapes were preferable to old ones. Mr. Tillery advocates the merits of the old or hung grapes against the new, and for some time an interesting and exciting discussion was kept up, one or two members of the upper stratum joining in the discussion. As if to bring the subject to some tangible form, Mr. Thompson stated at page 70 of the volume of the *Florist and Pomologist* just completed, 'If Mr. Tillery has no objection, and we are spared till the time, I will send newly ripened Black Hamburgs to any of the January or February meetings of the Fruit Committee of the Royal Horticultural Society, and he can send his best Black Grapes, for Hamburgs and Muscats could not be well compared in point of flavor, and let the Committee decide which are the best Grapes in point of flavor.'

"Accordingly, there being no regular meeting of the Fruit Committee in January, this special meeting was appointed, which was numerously attended both by members and visitors to witness the result of the contest. Mr. Thompson sent three beautiful bunches of new Black Hamburgs, which were ripe on Christmas day. The bunches were of good size, well set, wide shouldered, and shortly ovate. The berries large, and some of them quite hammered; but, though

quite black, the color as a whole was not so intense and even as in the bunch sent to us last year. This, we are told, has arisen from the dark, dull, and gloomy weather they had in Scotland during the whole of the autumn, when the season was more unfavorable than any that has been experienced for some years. Nevertheless, the grapes were so beautiful that the Committee decided first of all that *in appearance* they had the advantage over the bunches of Black Hamburg, of Black Tripoli, and of West's St. Peter's that were exhibited by Mr. Tillery. These, too, were as good of their kind as could be seen any where, but the shriveled appearance which had begun to set in contrasted unfavorably with the plump, fresh looking new Hamburgs. Then came the question of all others, the most important in the decision, flavor; for it was on this point that the issue hung. After a very patient and very close comparison, the decision was in favor of the *old* Black Hamburgs. Having begun to shrivel, and the juice being inspissated, the sugar was more concentrated than in the new. The question then arose as to the general merits of old and new in regard of appearance and general utility, and the decision was in favor of new grapes. We confess to a leaning in that direction ourselves, for we think there can not be a doubt but that fine, plump, and fresh Black Hamburgs, with their fresh, crisp, green stalks, are more attractive, pleasing to the eye, and much more slightly at table than Black Hamburgs that are shriveled, and from which the rigidity of the bunch and berry stalks have disappeared. Even in point of flavor the difference is so slight that it has to yield to the other qualifications. Altogether the discussion was a very interesting one, and no doubt the public will duly appreciate the opportunity that Mr. Thompson and Mr. Tillery have given them of coming to a decision on the subject.

"In addition to those exhibited by Mr. Thompson, there was a small box containing several bunches of new Black Hamburgs from Mr. McKenzie, of Kemp Town, Brighton. These, though not so large, either in bunch or berry, as Mr. Thompson's, were as black as



jet and covered with a dense bloom; a finer "blae" we never saw. But the climate of Brighton is a very different one from that of Dalkeith, and the amount of light in the one place during the winter months is very much greater than in the other, and hence the difference in color. The flavor of the two was, however, very close; the very black berries of Mr. Thompson's being equally rich in flavor with Mr. McKenzie's.

"Three magnificent bunches of Muscat of Alexandria were exhibited by Mr. Tillyard, gardener to John Kelk, Esq., of Stanmore Priory. So large and so beautiful were they that the Committee unanimously awarded Mr.

Tillyard a certificate of commendation for meritorious cultivation.

"Mr. Tillery also sent a splendid bunch of Trebbiano and some nice bunches of Muscat of Alexandria shriveled nearly to rasins, which were very rich and sugary in flavor.

"Mr. F.W. Pack, gardener to G. H. Vernon, Esq., Grove Hall, East Retford, sent a fine bunch of Black Barbarossa; and Mr. James Fowler, gardener to the Earl of Harewood, sent some very nice specimens of the Charlesworth Tokay, from which it is clear that this variety, if at all different from Muscat of Alexandria, is only a slight variation from it."

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## THE IONA AND ISRAELLA GRAPES.

BY THE EDITOR.

OUR readers are aware that we have many times alluded to new grapes of great excellence that would in good time appear. We are always willing to defer to the wishes of propagators not to associate their names with a fruit till they are prepared to introduce it to the public. Modesty in such matters is both wise and politic. The Iona having been announced, it is now in order for us to say that it is one of the grapes we alluded to. We have grown it for several years, have tasted the fruit for many more, and can therefore speak of it from our own knowledge. We propose to give a portrait of it by and by, with a pomological description, and shall therefore at present only allude to it in a general way.

The Iona was grown from seed of the Diana, a number of years ago, and selected from several thousand seedlings on account of its hardiness, earliness, and general good qualities. It was propagated for sale, but all the young plants were destroyed by fire, and its introduction to the public, in consequence, delayed for several years. This misfortune, however, has been the means of giving it a more thorough trial than it would probably have otherwise received. Dr. Grant, with whom it originated, gave plants

of it to several friends for trial, and their opinions, as far as we have learned them, all agree in giving it a very high character.

The Iona is a good grower, with short-jointed, firm wood. The foliage is of good size and much firmness, and well calculated to resist the attacks of mildew and similar forms of disease. It blossoms late, which we consider a good trait. The bunch is large, moderately loose, and usually double shouldered, a peculiarity not common to the native grape. The berries are large, transparent, and of a beautiful wine color. The flesh is melting to the center, tender, juicy, sweet, and vinous, with a flavor which we have often likened to the Red Frontignan, and which we have observed in no other native grape. The seeds are small. It is an early bearer, very productive, and ripens about ten days before the Isabella. On the whole, it is a grape which we have no hesitation in placing by the side of the Delaware. We must give the latter the pre-eminence, however, in the refined purity and delicacy of its vinous juice, though the Iona has a rare combination of the sweet and acid properties of the grape. The Iona we can safely commend to all who grow the vine.

The price of two dollars for a single vine

is putting it down pretty low, but that is Dr. Grant's affair, and not ours. It is an advantage to the public, however, inasmuch as it puts it within reach of the masses, and its distribution will be rapid. The Dr. has often said that he would never send it out till he could put the price of a first class vine within the means of the general public, and he has pretty fully redeemed his word.

Our personal knowledge of the *Israella* is confined mostly to its fruit. We selected it, some three or four years since, from a large number of seedlings raised by Dr. Grant, and named it after his lady. It is a very early and fine grape. We have examined

the vine a number of times, and found it to be a good grower, with firm wood, and large, substantial leaves. The bunch is large and shouldered. The flesh is melting, juicy, and very sweet, with a pleasant flavor, entirely free from "foxiness." The color is darker and the bloom heavier than the *Isabella*, and it is a better grape. It fruits early and bears large crops. It ripens about a week earlier than the *Iona*. We consider it a very valuable early grape.

In due time we shall have to announce one or two more very fine grapes from other parties.

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## HORTICULTURAL BUILDINGS.

BY FOREST LAWN.

It is with much pleasure that I notice the attention now being given by the HORTICULTURIST to the proper design, construction, and management of horticultural buildings. It is a subject that can be interestingly pursued, and will, no doubt, be as acceptable to the larger mass of your readers as any vein that has yet been opened. The proper form of glass houses for growing plants or fruit is something of which the general public are profoundly ignorant, and the enormous sums annually wasted in putting up structures totally unfitted for growing purposes is such as to make intelligent men pause, and ask for information on this subject, based on practical experiments intelligently pursued, having an object in developing results in design and construction that shall be of value.

For years past, horticultural buildings have been constructed after various imported notions, wholly unsuited to our climate, as the high roof and the sliding sash, the latter said to be necessary in the moist climate of England, which requires the removal of nearly all the glass in the fall to ripen the wood, our dry climate making such a provision an idle waste of money. There are so many serious reasons for discarding the sliding sash roof, that we are glad to see both you and other

intelligent growers condemning it. It is by far the most expensive manner of construction; the sash rails and the mullions between them obstruct nearly ten per cent. of the light; the different degrees of temperature and moisture, causing shrinkage and swelling, make their operation a never-ending nuisance; their great weight, which is indispensable to their strength, causes sagging, and consequent opening of all the joints in the glass; so much so, that in some houses that have come under my observation, the heating apparatus has had to be doubled in power, and in others abandoned, and the house turned into a cold grapery. We know of other houses that have been entirely abandoned and allowed to go to ruin, and of others that, although built in the best manner, and at great expense, have been entirely rebuilt at the end of two or three years. So utterly worthless for all purposes is the sliding sash roof, that we are surprised to see even ordinary mechanics, who do not know a Black Hamburg from a Begonia Rex, recommending their construction.

The fixed, continuous sash roof is so economical in cost, so elegant in its appearance, so beautifully adapted to curvilinear roofs, (always a distinguishing mark in extensive

ranges between a private and a commercial establishment,) with its lightness it adds strength, is always in order, and thoroughly adapted in all respects to the most perfect success in growing plants or fruit in our American climate. We do not, in our remarks, wish to anticipate you, but we can not forbear saying something on a subject that interests us exceedingly, and that bids fair to become one of great importance; indeed, it has already advanced to that point, that a country place is incomplete without some glass; and to those who have enjoyed a luxury of this sort, it is held in as high estimation as the best ten acres. The pleasure of a garden even dwindles rapidly away compared with the enjoyment afforded by a complete range of horticultural buildings; for these give in all seasons and in all weather a pleasure beyond description. So great have been the improvements made in the last few years that the glass structure has to a great extent ceased to be a luxury indulged in by the few.

A popular institution it must become, as well as a great source of amusement and occupation to all members of a family who have any taste for horticultural pursuits. The mystery in which their management has hitherto been kept we hope, with your aid, to see cleared away, and the principles of propagation, the growth of plants, and ripening of fruit under properly designed glass houses, made no mystery at all.

[There are so many of these glass sashes to be "smashed up," that we give Forest Lawn *carte blanche* to pitch into them pell mell; and he need have no compunctions about forestalling us. As we progress with our articles on Plant Houses, we shall treat the subject in such a way as to compel a recognition of the vast superiority of the fixed roof. Forest Lawn will find some remarks to the point in the article for the present month. All the objections he makes to the sash roof are sound and valid; and there are others that he has not named.—Ed.]

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## SECOND REPORT ON GRAPES FOR 1862.

BY PRATIQUER.

EDITOR HORTICULTURIST,—The criticism of Berkshire in the May number of the HORTICULTURIST, on my article in the December number, as regards "taking them in the order of their ripening," is just. I acknowledge the error, and have a bottle of wine, "our own raising," ready for him. Let his mouth water.

I am a Pratiqueur, a Grape (fruit) cultivator, and could easily have written an article, if his inquiry had been made earlier. *Now* I am very busy, and at night too much fatigued by labor, in tying and arranging my vineyard, to write elaborately. I will, however, endeavor to explain.

The report on Grapes, which surprised and dismayed Berkshire, was made out in the busy season last fall, at several sittings, in the evening, and I would amend it now by striking out the phrase above quoted; and in

order that even those who do not take the trouble to read closely may understand, I will reproduce the dates, and this time place them in the order of their ripening, taken from my field book, where the entries were made from day to day.

Sept. 10, 1862. Hartford Prolific, ripe.

" 15, " Creveling.

" 15, " Early N. Muscadine.

" 16, " Clinton.

" 20, " Delaware.

" 23, " Perkins.

" 24, " Catawba, *a few bunches only*.

" 26, " Concord.

" 26, " Allen's Hybrid.

" 26, " Hyde's Eliza.

" 30, " Isabella, fully ripe.

Oct. 5, " To-Kalon.

" 7, " Garrigues.

" 16, " Rebecca.

Nov. 2, 1862. Anna, not ripe.

" 2, " American Hamburg, hard and worthless.

" 2, " Diana, not ripe.

I stated that on the 17th September the Isabella was "ripe enough to market," and was then in the condition described by Berkshire. New Yorkers are so well pleased with this fruit that *they will buy it* when it is "*colored and called ripe*." I did not send any of my fruit until it was really ripe, and then received a good price for it, although the market was crowded with delicious peaches and other grapes in abundance, selling at 2½ to 4 cents a pound, while 15 cents was offered for my crop. The difference was in cultivation. The 2½ cent Isabellas were cultivated on natural principles, with large quantities of secondary shoots and puny wood, most of it unripe. The fruit set, but neither fruit nor shoots ripened. My fruit was cultivated, as nearly as could be done under all the circumstances, according to the directions in your "Hints on Grape Culture," which I confess I have read and *studied* with great care and attention, as being the only rational, intelligent, and intelligible treatise on Grape culture that I have seen adapted to native Grapes. I do not say this to flatter you, but to induce others to study the subject too. I consider success in Grape Culture to be something like learning to write; if one copies every handwriting he sees, he will never have any regular system, and so, whoever will demonstrate in his own practice the difference between 2½ and 15 cents grapes (of the same variety) must decide on his system of culture beforehand, by studying the best authors; and when he has so decided, must stick to it, even at the risk of being called an old fogey. It takes time to demonstrate a grape system, as well as any other principle in philosophy.

As to the time of ripening of grapes, I am sorry if my records do not suit other cultivators. I look upon the usual mode of stating the time of ripening, "so much earlier than the Isabella," as savoring a little of charlatanry. The Delaware is as yet the best grape, whether it ripens earlier or later than the Isabella, (it

ripens earlier, as far as I know,) and taking all things into consideration, (until some of the new varieties are established.) The Isabella, the Black Hamburg of native grapes, stands *with me* No. 2. I do not mean to say that it shall so stand with all others, for it will scarcely ripen north of latitude 42°. I am cultivating it in the Highlands (mountains) of the Hudson, latitude 41° 30', while others in the same region do not succeed with it. Thermometer on 4th February, 1863, indicated 14° below zero, and killed all my peaches. The Isabella grapes, which were exposed, tied to the trellis, are unhurt, as they show healthy buds and small leaves now, (middle of May.) I, however, cover my vines generally, except Delawares and Clintons; these vines *have hard, wiry wood, like hickory*, and will stand 30° below zero; how much more I can not say, as this is the lowest degree that my thermometer has indicated. (1861.)

I shall, perhaps, be able to give you the results of some experiments on the grape, as regards the effects of cold, in future years, as I have some rows of Isabellas that have never been covered, and will not be. I will say, however, that 30° below kills ordinary vines, as I allow none but fully ripe wood to remain on my vines over winter. I shall be glad if I can learn by experience how much they will bear. This is important to test the climate in which it can be cultivated successfully. It can be preserved over the winter if the wood is ripe, and any where where the summer months will average for three months together from 60° to 65°, the fruit will ripen. Without ripe wood nothing need be expected, even in Berkshire. This can be obtained by following your instructions on pruning, pinching, and *training*. Without good cultivation it will often fail any where. I wish to say to Berkshire, that the Concord is ripe enough to market, which means *colored and called ripe*, like the Isabella, many days before it is fit to eat. I suppose it is purchased by confectioners and others as an ornament for the table. My dates refer to ripeness, as applied to other fruits, sweet, delicious, without added "saccharine," and without any

desire to have it added, either for the table or for wine making.

As my vines will be older at the next ripening, I hope to give you a more reliable report in the fall of '63. I still look forward with great faith to the realization of our hopes, that some one of the new (unpublished) varieties may come up to the highest standard of excellence and earliness, and even crowd the Delaware down on the list. I hope this is not heresy.

[A word of explanation is necessary in

regard to the above. When we received the article we intended to publish it at once, but somehow or other it got mislaid. A few days since, in a paroxysm of pain from an ulcerated tooth, we laid hold of a book near at hand, when out dropped the "Second Report." It had grown old, but was still fresh, and its fate determined at once as an act of justice to both "Pratiquer" and "Berkshire." Pratiquer is all right now, and will have a clear field for his fall report.—ED.]

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## THE CONCORD GRAPE—REPLY TO MR. DELIOT.

BY GEORGE HUSSMANN, HERMANN, MO.

MR. EDITOR,—I must commence my article with the same word as Mr. Deliot. I am disappointed; for I thought that Mr. Deliot, being a Frenchman, and also a gentleman, would at least argue the point with the politeness for which that nation is famous, and considerations for the feelings of others, even his opponets, which always characterize the true gentleman. Instead of that, he descends to mean insinuations against my character; even doubts that I have been in the possession of my senses when I wrote my article, etc.; and if I could and would descend to the same language, and you would insert my articles, I am afraid the HORTICULTURIST would no longer be known as a journal whose correspondents are all men of education, and possessing those kindly feelings, which the pursuits they follow should create, towards every thing, and every body. But there is no danger of this. I shall treat Mr. Deliot's article, not as it deserves, but with due courtesy towards the gentleman.

That gentleman commences by insinuating that I am standing on very slippery ground in my defense of the Concord. I have asserted nothing which I can not *prove* by plain facts, and, therefore, I think I am on very *safe* ground. He further says that, had I waited a month longer, I would have used

different weapons. His meaning here is not clear; if he means that I would use such weapons as he does, I might have waited till doomsday, and still "*disappointed*" the gentleman, for I can not and will not descend to them.

He next takes offense because I asserted that his article would serve to mislead your readers. He is half right and half wrong there; I confess to a slip of the pen; I should have said, many of your readers. All I intended to do, was to defend the Concord *here*, and maintain, as I still do, that it is the best grape for every body to plant *out here West*. I can not know what succeeds best at the East, nor do I pretend to write for your Eastern readers. I still maintain that Mr. Deliot never tasted of a *ripe* Concord; if, as he says, the Concord berries with him contain only three or four drops of thoroughly sweet juice. I have given my definition of what I consider a *ripe* grape; if the Concord is not of better quality than Mr. Deliot himself describes it to be with him, it is clear that it does not ripen with him. Please consider your own words, Mr. Deliot, and remember, that my inference was only drawn from them. And because I judge Mr. Deliot's grapes by his own words, I am not "in the possession of my senses when I wrote that." Indeed, Mr. Deliot, I do not envy you

the proud eminence from which, according to your own words, you look down on poor, demented me and other folks, who must also be out of their senses, because they hold the same opinion, as, for instance, Mr. Knox, of Pittsburg, Mr. Samuel Miller, and many others I could name.

He further takes offense at those fifty drops of juice in each berry. It was but yesterday I took two berries of Concord, and before two witnesses I pressed out of them, between my fingers, 161 drops of juice, 78 from one, and 83 from the other. I still maintain that *here* it is but slightly foxy, of fine flavor, has a thin skin, is thoroughly sweet, and when fully ripe, its pulp is almost dissolved. If you and he come and see me this month, Mr. Editor, I hope to prove all this, and I think if Mr. Deliot had waited until then, we would have heard a little less from him. He says, he finds it hard to swallow my story. All I ask is, that he should come and see and judge for himself. Would I insist upon this if I was wilfully lying to the public, as he would make it appear? And I do insist upon it. I have written to him, and sent him a challenge to come this month, and I am going to hold him to it. He is in justice bound to accept it, and I hope you will accompany him, and I will pledge myself to press 70 to 80 drops out of one Concord berry before your eyes. He insinuates that, had I thought you would accept the invitation, I would not have sent it, knowing that you could not find, at my place or any other, Concord berries containing fifty drops each. Our friend here deliberately accuses me of dissembling. Even if capable of it, (and I hope I can find friends enough to testify that I am tolerably reliable,) would I not play a very unsafe game in inviting you, as you might accidentally accept of the invitation, and where would I be then, if I had no facts to support me? Do come, and I am willing to abide by your judgment. I want to corner friend D., and make him eat his own words, and I am sure I can do it. I am going to press him against the wall, where there is no backing out, and I want you to bear witness.

I simply say the Concord is very good; and so it is. I do not put it upon an equality with the Delaware, simply because I do not think it quite so good in quality, but it is very good indeed. Does it follow, to give an example, because I do not think the White Doyenné as good as the Seckel, that it must therefore be bad? Of all the grapes I have, and I have some sixty varieties, there are only four which I prefer to the Concord in quality; these are the Delaware, Clara, Herbemont, and Diana. I think the Concord decidedly better in quality than the Catawba, and much more productive, as it is much more healthy and hardy.

Mr. Deliot, it seems, purposely perverts my words. I say that out of sixty varieties I grow, the Concord is the most profitable one. He makes it appear as if I had said, that out of sixty varieties, the Concord is the only one I can grow with profit. Please stop that practice, Mr. D., and leave my words as they really are. I say nowhere that it is the *only one* I can grow with profit. I have about fifteen varieties I can grow with profit; but of them, the Concord is the most profitable, and Norton's Virginia comes next. Our sun is very good for a good many varieties, as you will find out if you will come to visit us.

That the Concord *grows* pretty well in your cold, foggy climate, nobody doubts; but if it does not contain, there, more than three or four drops of thoroughly sweet juice, I *know* that it does not ripen with you as it should. Take care, Mr. Deliot; I may come to *see you*, and we will then test the quality of *your* grapes, and before witnesses, too.

The whole of Mr. Deliot's article is a mass of perversions. Here is another of them. I stated that my Concord vines were *cut down* in June by a hail storm, not *destroyed*, as Mr. Deliot has it. Please consider what you say, Mr. Deliot. I can bring witnesses enough to prove every word of my statements. They were cut down by hail to about 18 inches from the ground, and stripped of every leaf, but the suckers started again, as the *root* was uninjured,

consequently not destroyed. I also do not say that the layers were made from them in the month of July, but only that they were layered *in the month of July*. We leave our layers a little longer in the ground than one month, whatever Mr. Deliot's practice may be; and it will appear very natural to any one conversant with grape growing, that in a period of over a month, during the time when the vine grows most rapidly, they could make growth enough to produce wood long enough to layer it.

The insinuation about the reason why I consider the Concord the best is as ill-mannered as it is insufficient. I find it just as profitable to grow Delaware vines to sell, as I do the Concord, because the Delaware plants, although I can not grow as many of them, bring treble the price of the Concord. Would I judge of Mr. D. in the same uncharitable manner as he does of me, I might infer *why* he praises the Delaware so much, as you, Mr. Editor, tell us that he has propagated more Delawares than any dozen men among us; but I am willing to think that he is in earnest; that he judges grapes according to the best of his experience, *in his surroundings*; but I *deny* most emphatically that he knows what is good *for us here*, and that he, or any other man, is on safe ground, when he recommends one variety as best for *all* locations throughout the Union.

He next seems to doubt that I can grow the Delaware from cuttings, and seems to think it strange that I can not grow it afterwards. That the Delaware grows *here* from cuttings I can *prove* by several besides myself, who find no difficulty to strike them. Does it follow that because Mr. D. and many others at the East can not grow it from cuttings there, it must also fail here, in an altogether different soil and climate? Our trouble with the Delaware here, is in the latter part of the season, in August, when it is generally attacked by leaf-blight, which seems to paralyze all the growth of the vine. You see, Mr. Deliot, this is all very natural, and if you accept my challenge, you can see it with your own eyes.

He also wants to know how that wine was made. I will tell you what I consider *wine*. Wine is the pure, fermented juice of the grape, without any addition whatever; and the Concord wine I speak of was made in that manner. I consider it an injustice to the juice of the noble grape to mix any thing else with it, and in its pure state, I consider it the most powerful agent to promote true temperance which we have. His closing remark is just as one-sided and full of local prejudice as the rest of his article. I consider it simply ridiculous to assert that any one grape is "the best known or grown in America;" and in the same breath he contradicts himself, for he insists upon it, that we must find a better one. I take a different position; I say, if our friends at the East find the Delaware the best, let them grow it by all means; if we here can grow the Concord, or any other variety, better, let us grow the one which suits us best, and still try to find better ones. So let every one grow that variety which, in his location, suits best. We will then soon have our hillsides covered with vines, and the poisonous brandy and whisky displaced by pure grape juice. If each one puts his shoulder to the wheel, and works towards that end, and with the best means his locality affords him, we will accomplish a truly noble task.

But I exceed the limits of patience if you or your readers, I am afraid. Had not Mr. Deliot attacked me in such a way, that justice to myself demanded a lengthy defense, I would not have trespassed so far on your space. Hoping that on this ground, you and your readers will excuse me, I remain truly your and their devoted friend.

[There has now been quite enough, and even too much, said in the way of personalities in this discussion, and there should be an end to them. We think they do more injury than good to the cause of grape growing, and any thing that tends to the injury of this cause we must prevent. Let it be understood, therefore, that if any thing further is said by either party, we shall

strike out all personal allusions. One word more. Mr. Hussman in one place alludes to us as if we too were his opponent. We must at once disabuse his mind of everything of the kind. It is not our duty to be the opponent of any of our correspondents. We should be unfit for our position if we

should allow ourself to occupy such a relation even for a moment. We entertain none but the kindest feelings for Mr. Hussmann, and have implicit confidence in his professional integrity as well as his personal veracity.—Ed.]

### COCOANUT FIBER REFUSE GENERALLY USEFUL AS A MANURE.

HAVING introduced the Cocoanut waste to the notice of our readers, they will probably be interested in reading what is thought of it abroad, where it was first used for horticultural purposes. We therefore give the following remarks from Mr. Daniel Beaton, who has used it more extensively than any other man in Europe. They are taken from the *Cottage Gardener*.

"For the last seven years I have been telling how good I found the cocoanut fibre refuse for all plants, and when I suggested it the other day as a good speculation for nurserymen to get truck-loads of it down into the provinces, I was certain it would be much better for all kinds of soil, and pay better than guano. That I am quite sure of; but I did not expect to be asked privately how to use it, as I am in a letter from "F. D." I said at least a hundred times the way I did use it, but the best way to use it is not yet discovered. Indeed, the best of us do not know one fourth of its value; but I put it only higher in importance than guano. Although sixty years of age, I expect to live to see it coming in shiploads from Ceylon and other places, after the farmers have exhausted the supply of it in Europe. There is not a kind of soil but it will im-

prove. The very stiffest clay, if you drain the water from it, might be rendered as mellow by it as to do for potting *Cinerarias* in, or Ferns, or any plant; and the sand of the desert is not so dry but it will cool and moisten it, and keep it so if it is well covered with it. For all market-garden plants, and for *Asparagus* in particular, I have full testimonials that nothing can excel it. My own garden, which was a poor, black sand, is now one of the most fertile in Surrey—by mixing two parts of the stuff to one part of the black sand to the depth of eighteen inches; but I have it mixed twice that depth.

"Use it like leaf mould, or in lieu of peat, mulch and mix with it all manner of soils; sift it and put half an inch of it over all your grass land, and it will give such a "bottom" as it never had before. The rankest clay in England could be made into potting loam by mixing twice its bulk of the refuse with it in two seasons. When mixed, spread out as thin as possible to get it well frosted and sunned, and when it is quite dry, in July or August, run a roller over it, and then give it another frosting and sunning, and see if it does not do any thing you require."



## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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PINCHING "OUT" LATERALS—TO WHOM IT MAY CONCERN.—A person called at our office in our absence, and stated that he had pinched out all the laterals on his vines, and that all the buds in consequence had broken, and he was greatly alarmed, etc. But this was not the worst of it, as he further stated that he had followed *our* directions in doing this, and now he wanted us to get him out of his trouble. This is cool enough, to say the least of it. Our rule is to take no notice of unknown correspondents; but we are willing at any time to break the rule to help a friend out of trouble, and we hope this may meet his eye. We might dispose of the case by saying, "It served you just right!" But that, you see, would not help you one bit. Now let us to the point. You did *not* pinch out the laterals according to any directions which we have given in these pages or elsewhere. Do you not perceive what a difference that makes in the case? So far from having directed you to pinch out the laterals, we have always cautioned you against doing it. There are a hundred places or more in our "Hints" where we have told you not to do any thing of the kind; and in one place we have occupied a number of lines in telling you of the evils that would result from pinching out these laterals. Yet you have pinched them out remorselessly; and now that the evil is upon you, you seek to get rid of it, and lay it at our door. We are tempted to become classical and quote Caesar against you. But if you can not understand our plain directions about later-

als, you certainly would not understand Latin.

To be serious, you have made a grave mistake, and have read our "Hints" to very little purpose, if you have an impression that there is any thing in them that would give you the least warrant for pinching out your laterals. So far from having directed them to be pinched out, we have always been particular to state to precisely how many leaves they should be pinched, in each particular case; and this has been repeated times without number. We can not say without seeing them, or having their full condition described, what is best to be done with your vines. From the message you left, we conclude that they are three years old. If the buds are badly broken, you have no course left but to make new arms next year, and this you can readily do by cutting back; but your loss will be great. If you will send us the full particulars, we will give you precise directions for the future treatment of your vines; but we must beg you not to repeat the assertion, that the laterals were pinched out by any directions that we have ever given.

STRAWBERRY PLANTS.—We are indebted to Mr. Marshall, of Poughkeepsie, for a parcel containing some new varieties of Strawberries, for which he will please accept our thanks. They were in good order, and the plants very fine. We are making up a new experimental bed, and presents like this are very acceptable indeed. We are in no fear of receiving too many.

"REAL, ORIGINAL, SIMON PURE" LIMA BEANS.—Last spring Mr. Isaac Buchanan sent us a package of this kind of Lima Bean. They were procured direct from Lima, by John Groshon, Esq., President of the New York Horticultural Society. He at the same time procured seed of the original Lima Squash. It becomes our duty to say to our readers, that there is something very peculiar about these beans. We put in about thirty hills; but up to the present moment not one of them has flowered, and there is not the least indication that they ever will. Are they not very peculiar Lima Beans? We know of a seed grower who put in three hundred hills, but up to the 16th of September not one had flowered! We know of scores of others who sowed more or less, but as yet, there is not a sign of a flower. We repeat, there is something very peculiar about them. We have no fault to find with their manner of growth; they are as stout and rampant as one could wish. We have pruned and pinched, and scolded and coaxed, and let them alone by turns; but they are incorrigible and rebellious still. As for giving them up, we do not mean to do any thing of the kind while there is a bean left.

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EARLY FROST.—On the morning of the 21st, there was a widely-extended frost, but not generally, as far as we can learn, very heavy. The damage done does not seem to have been very serious. Several weeks before this there was a sharp frost in many sections of the country, and in some of the western states the damage is said to have been quite serious.

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THE GRAPE CROP AT THE WEST.—We find in the *Cincinnati Daily Gazette* the following letter from R. Buchanan, Esq., to the President of the Cincinnati Horticultural Society. Its statements agree with information received from other sources. It will be observed that the rot is confined principally to the Catawba. The rot is not confined to the West this season; it is more or less general all over the country.

*D. B. Pierson, Esq., President Cincinnati Horticultural Society:*

DEAR SIR,—At your request, I present a Report on the Grape Crop. In the vicinity of Cincinnati, and for thirty or forty miles around, the yield will be from one-third to one-half less than an average crop, supposing 200 gallons to the acre to be the average. This will also be the result around Ripley, Vevay, and in those parts of the Ohio Valley on the limestone formation. In the coal and sandstone regions, and in the islands and on the shores of Lake Erie, the crops, with very few exceptions, are good. The rot, so injurious to us, did but little damage there. In Missouri, Southern Illinois, and Indiana, I am informed, the rot has destroyed one-third of the crop. But on the Upper Mississippi, and in Wisconsin, the grapes are said to be very fine. In Kentucky, near Lexington and Frankfort, some vineyards have escaped, while others have suffered from this disease. These remarks apply, of course, to the Catawba grape, with which nearly all our vineyards are planted. The Delaware, Norton, Concord, and some other experimental varieties, have showed but little, if any rot. Since the rot ceased in August, the weather has been very favorable for ripening the grape, and the quality of the wine ought to be good.

Very respectfully, R. BUCHANAN.  
*Clifton, Sept. 10.*

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GRAPE AND WINE EXHIBITION AT CLEVELAND, OHIO.—Our friends at Cleveland are engaged in getting up a Grape and Wine Exhibition on a large scale. It will take place on the 30th of September and 1st and 2d of October. The prize list is exceedingly liberal, the first prize for a collection of grapes being \$25. A commendable feature of the list is the fact that the prizes are all presented by citizens of Cleveland, which speaks highly for their liberality and just appreciation of the subject. During the exhibition, meetings will be held for the purpose of discussing matters pertaining to grape culture and the manufacture of wine. The occasion will no doubt be a very interesting

one, and we commend it to the notice of our grape-growing friends. The circular comes to hand just as we are putting our last sheet to press, or we should say more. Such matters should come to us earlier in the month.

FAIR OF THE AMERICAN INSTITUTE.—We have only been enabled, on account of illness, to do more than examine the fruit on exhibition, which is very fine. We shall examine the departments of flowers, vegetables, etc., hereafter, and offer some remarks on the whole. In the meantime we give the list of awards in the Horticultural Department.

#### FRUIT.

T. T. Lyons, Plymouth, Mich. For the best collection of Apples. *Gold Medal*.

O. S. Hathaway, Newburgh, N. Y. For the best 30 named varieties of Table Apples. *Silver Cup*, \$10.

T. T. Lyons, Plymouth, Mich. For the 2d best 30 named varieties of Table Apples. *Silver Medal*.

C. H. Earl, Newark, N. J. For the best 12 named varieties of Table Apples. *Silver Medal*.

T. T. Lyons, Plymouth, Mich. For the 2d best 12 named varieties of Table Apples. *Bronze Medal*.

E. Williams. For the best 12 Table Apples, (Fall Pippin.) *Bronze Medal*.

C. H. Earl, Newark, N. J. For the 2d best 12 Table Apples. *Book Premium*.

William L. Ferris, Throgg's Neck, N. Y. For the best collection of Pears, 50 varieties. *Gold Medal*.

Chas. Downing, Newburgh, N. Y. For the 2d best collection of Pears. *Silver Cup*, \$10.

John D. Wolfe, Throgg's Neck, N. Y. For the best 30 named varieties of Pears. *Silver Cup*, \$15.

Daniel W. Coit, Norwich, Conn. For the best 12 named varieties of Pears. *Silver Cup*, \$10.

P. T. Quinn, Sup't for Jas. J. Mapes, Newark, N. J. For the 2d best 12 named varieties of Pears. *Silver Medal*.

E. Williams, West Bloomfield, N. J. For

the best 6 named varieties of Pears. *Silver Medal*.

Isaac Merritt, Hart's Village, N. Y. For the best collection of Native Grapes. *Silver Cup*, \$10.

Chas. Downing, Newburgh, N. Y. For the 2d best collection of Native Grapes. *Silver Medal*.

B. H. Mace, Newburgh, N. Y. For the best dish of Grapes, (Delaware.) *Silver Medal*.

Henry Steele, Jersey City, N. J. For the 2d best dish of Grapes, (Isabella.) *Book Premium*.

S. F. B. Morse, Thomas Devoy, Gardener, Poughkeepsie, N. Y. For the best Hot House Grapes. *Silver Cup*, \$10.

Wm. C. Wilson, 43 W. 14th St., N. Y. For the 2d best Hot House Grapes. *Silver Medal*.

S. F. B. Morse, Thos. Devoy, Gardener, Poughkeepsie, N. Y. For the best Muskmelons. *Book Premium*.

S. F. B. Morse, Thos. Devoy, Gardener, Poughkeepsie, N. Y. For the best Watermelons. *Book Premium*.

#### Discretionary.

Ellwanger & Barry, Rochester, N. Y. For the best general collection of Fruit.

Isaac Hicks, North Hempstead, L. I. For 30 varieties of Apples.

James Wiggins, Weehawken, N. J. For Peach Trees in pots.

Hovey & Co., Boston, Mass. For a large collection of Pears, (100 varieties.) Too late for competition.

#### PLANTS AND FLOWERS.

Isaac Buchanan, Astoria, L. I. For the best collection of Miscellaneous Plants. *Silver Plate*, \$25.

Wm. Baker, corner 42d St. and 2d Ave. For the 2d best collection of Miscellaneous Plants. *Silver Cup*, \$10.

Isaac Buchanan, Astoria, L. I. For the best six variegated leaved Plants. *Silver Medal*.

A. B. Clark, Park Ave., between 36th and 37th St., N. Y. City. For the 2d best six variegated leaved Plants. *Book Premium*.

Isaac Buchanan, Astoria, L. I. For the best single specimen plant. *Bronze Medal*.

Isaac Buchanan, Astoria, L. I. For the best collection of Orchids. *Silver Cup*, \$10.

Wm. Baker, corner of 42d St. and 2d Ave., N. Y. City. For the 2d best collection of Orchids. *Silver Medal*.

Wm. A. Burgess, Glen Cove, L. I. For the best collection of Cut Flowers. *Silver Cup*, \$10.

Thomas Cavanach, Yates, near Fulton Av., Brooklyn. For the 2d best collection of Cut Flowers. *Silver Medal*.

Joseph E. Cavanach, corner of Washington and Greene, Brooklyn. For the best Basket of Flowers. *Silver Medal*.

A. G. Burgess, East New York, L. I. For the best Display of Dahlias. *Silver Cup*, \$10.

C. S. Pell, N. Y. Orphan Asylum, 74th St. and Broadway, N. Y. For the 2d best Display of Dahlias. *Silver Medal*.

A. G. Burgess, East New York, L. I. For the best 12 named Dahlias. *Silver Medal*.

Wm. H. Mitchell, Harlem, N. Y. For the 2d best 12 named Dahlias. *Book Premium*.

Isaac Buchanan, Astoria, L. I. For the best Hybrid Gladiolus, 25 varieties. *Silver Medal*.

Peter Henderson, Jersey City, N. J. For the best collection of Verbenas. *Silver Medal*.

Peter Henderson, Jersey City, N. J. For the best collection of Petunias. *Silver Medal*.

Thomas Cavanach, Yates Ave., corner of Fulton, Brooklyn, N. Y. For the best Floral Design. *Silver Cup*, \$10.

A. C. Chamberlain, corner De Kalb and Ryerson St., Brooklyn. For the best Hanging Basket of Plants in bloom. *Silver Medal*.

David Clarke, 643 Broadway. For the best Hanging Basket of Ornamental Plants. *Silver Medal*.

#### *Discretionary.*

Isaac Buchanan, Astoria, L. I. For the best Double Zinnias.

Wm. Davidson, Brooklyn. For a collection of Verbenas.

Peter Henderson, Jersey City. For Seedling Verbenas.

Isaac Buchanan, Astoria, L. I. For seedling Petunias.

David Clarke, 643 Broadway. For Rustic Stands.

S. F. B. Morse, Poughkeepsie, N. Y. For Ferns and Lycopodiums.

#### VEGETABLES.

S. F. B. Morse, Thomas Devoy, Gardener, Poughkeepsie, N. Y. For the best collection of Culinary Vegetables. *Silver Cup*, \$10.

S. F. B. Morse, Thomas Devoy, Gardener, Poughkeepsie, N. Y. For the best collection of Potatoes. *Silver Medal*.

E. Williams, West Bloomfield, N. J. For the 2d best collection of Potatoes, 6 varieties. *Book Premium*.

E. Williams, West Bloomfield, N. J. For the best 12 ears of Sweet Corn. *Book Premium*.

S. F. B. Morse, Thomas Devoy, Gardener, Poughkeepsie, N. Y. For the best Table Squash. *Book Premium*.

S. F. B. Morse, Thomas Devoy, Gardener, Poughkeepsie, N. Y. For the largest Squash. *Book Premium*.

D. A. Bulkley, Williamstown, Mass. For 3 varieties of Seedling Potatoes. *A Silver Medal having been before awarded.*

#### *Discretionary.*

Justice Slater, Jersey City, N. J. For Specimens of California Red and Yellow Tomatoes.

FLAX AND HEMP.—The following circular is brief, and we print it entire. There are some of our readers who take a direct interest in the subject, and we hope they will respond by furnishing the information called for. The subject, in the present condition of the nation, is not likely to be overestimated. If flax and hemp had been more generally grown, the price of paper never could have risen as it did.

DEPARTMENT OF AGRICULTURE, }  
WASHINGTON, D. C., September 5, 1863. }  
*To the Growers and Manufacturers of*  
*Flax and Hemp.*

Congress having, at its last session, placed in the hands of the Commissioner of Agricul-

ture an appropriation of \$20,000 "For investigations to test the practicability of cultivating and preparing Flax and Hemp as a substitute for Cotton," the Commissioner, after consultation with members of Congress and with manufacturers, determined to place the whole matter in the hands of three Commissioners, and accordingly appointed Hon. J. K. Morehead, of Pittsburg, Penn.; John A. Warder, of Cincinnati, Ohio; and William M. Bailey, of Providence, R. I. The Commissioners met at the Department on Thursday, September 3, 1863; chose Hon. J. K. Morehead Chairman; appointed O. A. Stafford, of the Department, their Clerk; and passed the following resolution:

"*Resolved*, That the Commissioner of Agriculture be requested to issue an advertisement, by circular or otherwise, calling upon manufacturers and experimenters to send to this Department, on or before the 20th day of November, samples of the fibers and fabrics prepared by them, to be accompanied, in all cases, by precise statements as to the various processes, and with estimates as to the probable expense per pound of the preparation of the material, and of the proportion of fiber that may be produced from a given quantity of the stalks or straw of flax and hemp."

All packages of specimens or samples, and all letters on this subject, should be addressed to the Commissioner of Agriculture, with the endorsement, "For Commissioners of Flax Culture."

ISAAC NEWTON,  
*Commissioner.*

CATALOGUES, &c., RECEIVED.

*J. C. Maxwell & Bros.*, Geneva, N. Y.—Wholesale Catalogue of Trees, &c., for the Autumn of 1863 and Spring of 1864.

*J. M. Thorburn & Co.*, 15 John St., New York.—Descriptive Annual Catalogue of Bulbs and other Flowering Roots, with Directions for their Culture and Management.

*Fleming & Davidson*, 67 Nassau St., New York.—Select Catalogue of Dutch Bulbous Roots, &c.

*James Vick*, Rochester, N. Y.—Catalogue of choice hardy Flowering Bulbs, &c.

*Francis Brill*, Newark, N. J.—Descriptive Catalogue of Strawberries, &c.

*Geo. W. Campbell*, Delaware, Ohio.—Descriptive List of hardy Native Grape Vines.

*Edward J. Evans & Co.*, York, Penn.—Catalogue of Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c. Also, Descriptive Catalogue of Native Apples, (principally Southern,) new, or but little disseminated.

*R. Buist & Son*, Nos. 922 and 924 Market Street, Philadelphia.—Catalogue of their unrivaled collection of Flowering Bulbous Roots.

*William Elliott*, No. 27 John Street, New York.—Descriptive Catalogue of Bulbous Roots, with Directions for their Culture and Management.

*D. Brinckerhoff & Co.*, Fishkill Landing, Dutchess Co., N. Y.—Wholesale Catalogue of the Fishkill Landing Nurseries for Autumn of 1863 and Spring of 1864.

*Ellwanger & Barry*, Rochester, N. Y.—Descriptive Catalogue of Fruits cultivated and for sale at the Mount Hope Nurseries.

CORRESPONDENCE.

EDITOR HORTICULTURIST,—Inclosed I send you a couple of leaves of the Delaware grape, showing the effects of a very minute insect. With me this is a new enemy to the grape, this being the second year of its appearance. Last year I first noticed it on the Wyoming grape, and a seedling Delaware; this year these two plants were very

much injured, as I had to cut off every twig that grew after about the 1st of July. One plant of the original Delaware is now full of this new pest, and I am cutting off all the new growth. A very few other varieties of grapes are being slightly attacked, yet I have no doubt that in a few years it will attack probably all the thin-leaved

vines, if not arrested. I would be pleased to hear from you on the subject, through the *HORTICULTURIST*, if this pest is known to you or to other grape cultivators, and if any remedy can be applied, other than cutting off the branches, etc. With a strong magnifying glass you will find dozens of eggs in the little galls or excrescences on the leaves.

Very respectfully, T. B. GARBER.  
Columbia, Pa., Aug. 18, 1863.

[The leaves were duly received. This enemy is not a new one, though it is seldom so numerous as to attract attention. We have seen more of it this year than ever before, and it may in time become formidable. The leaves sent are literally covered with excrescences, and in each will be found a small yellow maggot. We have seen other cases this year quite as bad as yours. Your proper course is to remove all the shoots affected, and burn them up. Singularly enough, we received other examples soon after yours came to hand, some of them from very distant parts of the country, so we conclude the pest is wide-spread this year. The best advice we can give is to burn the shoots up.—ED.]

EDITOR *HORTICULTURIST*,—I am a novice at Grape culture, but an attentive reader of the principal Horticultural journals. Under their inspiration, I stopped my vines about the last of July, when their growth had extended beyond the top of the trellis. To my surprise, they have since gone to work and produced not only a good deal of *new* wood, but an additional set of incipient grapes, to the very apparent detriment of the fruit already formed below.

Pray set me right, and show me wherein I have unwisely read or ill-applied my reading.

BALTIMORE COUNTY.

Baltimore Co., Md., Sept. 18, 1863.

[You are now experiencing one of the "sensations" peculiar to the novice in grape training. We should have been glad to know the age of your vines and the height of your

trellis; but we can guess pretty nearly their condition. Your vines are evidently in good, robust condition. It seems apparent, too, that you did something more than simply *pinch* out the ends of the shoots. On this point, read our Hints in the last and in the present number. But let us tell you what to do now. You have no cause for alarm. Under such circumstances, your proper course was to remove the new grapes, and pinch out the *ends* of all the laterals except one; this one to be the highest, and to be permitted to extend itself for a while. The others, when they broke again, should have been pinched in as usual. This course is intended to keep the sap below as much as possible without breaking the buds. About the first week in September is the time to *stop* your shoots, or rather to break the ends *down* without breaking them *off*. Please let us know how far we have met your case; for we love above all things to meet just such difficulties as these.—ED.]

EDITOR *HORTICULTURIST*,—I have in my garden a few Delaware grape vines, this being their second season. They stand four feet apart in the row, having been planted with the design of training them according to the directions given in the *HORTICULTURIST*. Last year they were carefully kept to single canes, and pruned to three eyes in the fall. Owing to partial neglect, occasioned by my absence, I found them, on the 6th of August, in the following condition: The most of them had been stopped at five and six feet; the growth was good, the canes being three-eighths of an inch thick, nearly the whole length. (I should have said above, the growth last year was about one-quarter of an inch cane.) There are, however, one or two canes to each vine much smaller than the main one, growing from last year's wood, whereas I had intended to keep them all to one cane this year. All have laterals from one to three feet long. What is to be done with the superfluous canes and with the laterals? Would it not be best to cut them all off now, and next year keep each vine to only one cane?

As a rule, how far may the knife be used at this season, or in the fall, where summer pinching has been too long neglected?

A Concord, which was planted in the spring of 1861, and has grown well ever since, I now find running rampant with three canes, each about three-eighths of an inch, besides others smaller. This has been kept to one cane until this year. Shall I trim the others now, or in the fall, and keep next year to one or two?

When do you recommend to shear Hemlock hedges, which have not reached the allotted height of seven feet? Is the spring shortening in sufficient for a young Honey Locust hedge, which by the middle of August sends out shoots from two to five feet long? Be so good as to give the reasons why any apple can not be advantageously worked upon the Paradise? Can the Sweet Bough be so applied? And what other first class varieties may be worked upon this stock? Very respectfully, your obedient servant,

A SUBSCRIBER.

Owego, Tioga Co., N.Y., Aug. 19, 1863.

[Your case is by no means a very uncommon one. Vines often, through neglect, attain the condition yours are now in. It will not do to resort to severe pruning now; you would injure your vines permanently. Your best course is to pinch out the ends of the laterals, and break down the ends of the leading shoots. The knife is to be used in summer with extreme caution. Prune this fall for two canes next year; your vines ought to produce two stout ones. On some of them we think you might begin to form the arms next year; but that must depend upon the condition of the canes. We prefer to prune Hemlock hedges in the spring. If done a second time during the same season, about the 1st of September is the best time. We should prune a Honey Locust hedge twice a year while young, to make it compact. Apples may be advantageously worked on Paradise stock, if wanted for the garden; but some kinds do better than others. The Sweet Bough is a very good apple for this purpose; so are

the Swaar, Melon, King of Tompkins Co., Fall Pippin, Early Joe, Early Harvest, and others.—ED.]

EDITOR HORTICULTURIST,—In your number of June, 1863, I read with great interest your article on "Pond's Seedling Plum," as a dwarf, which puzzles me somewhat.

Allow me to inquire how dwarf plums ought to be established?

Is Pond's Seedling Plum naturally a dwarf; to say, is it a variety that grows to bearing without obtaining the extent of growth and development that generally plum trees attain?

Or is it kept dwarf from being grafted or budded on a particular stock, as, for instance, the pear on quince, having the particularity of checking the growth and of forcing to early bearing?

If this is the case, what kind of stock is there employed? Is this a secret?

Or is the way of keeping the kind above named, in the shape of a dwarf, only by pruning? Or, perhaps, is it to be kept dwarf, or is it called a dwarf in consequence of being kept in a pyramidal shape, furnished with limbs all over the main stem?

Can I hope, dear Editor, to have a little explanation about this matter? You will oblige your very obedient, but ignorant reader,

EUGENE A. BAUMANN.

Morrisania, Aug. 13, 1863.

P. S.—I hear every where great complaints about the grapes, principally about Catawba. Mine are pruned in an old-fashion, but not in general use; they are as healthy as I ever have seen any other kind, and bunches as large as hot-house Black Hamburg.

[We very gladly furnish you the information asked for. Plums that are branched low, root pruned, and grown as pyramids, are commonly called dwarfs; but we must admit that this is a very loose manner of using terms. You will understand, of course, that all trees must be branched low in order to meet our notions of a dwarf; yet an apple on an apple stock, or a pear on a pear

stock, may be branched low, and yet not be a dwarf. If you want to make a genuine dwarf plum, you can work it low on the German Sloe. That is the best thing for the purpose that we have seen. You will then have a plum somewhat in the condition of a pear on quince. The complaints about grapes are this year only too well founded. Here and there parties escape; you are fortunate in being one of them. Will you be so good as to explain your old-fashioned method of pruning? We should like, too, to have one of your big bunches of Catawbas. You have heard, of course, that we can eat five pounds a day.—Ed.]

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EDITOR HORTICULTURIST.—Pardon a few queries from an original subscriber to the HORTICULTURIST, which you are making indispensable to both nurserymen and amateurs.

Do *White* Grapes sell as well in the New York market as red or dark colored?

No grape in this vicinity promises better than Hartford Prolific *for profit*. Please tell us whether well adapted to vineyard culture; also, Allen's Hybrid, Maxatawny, Creveling, as far as proven. Delaware, of course, is my first choice, and I will gladly take the chances, though many West are provoked at its slowness. Yet this will make those who do handle it right the greater winners. After growing it five years, I have now "just got hold of it," to my mind. The process is simple enough—all in four words—*Attention the first year*.

Of course, it needs reasonable culture throughout, but hitherto, (though ashamed to own it,) like perhaps ninety cultivators out of a hundred, I have neglected staking, and taking off all but one leader, and tying up *the first year*, and until within even five weeks the present year! At this writing,

Sept. 5, on plants going the same unpromising road, as late as the first week in August, sprawling feebly about, I have now *three to five feet of splendid canes!* Let all unsuccessful wooers of the beauty Delaware "stick a pin here," and see if they have not erred as we have. Let me say, further, that this experiment is on the very same ground, and in the self-same rows we have had them on for two years previous, without any kind of satisfaction, and the very same style of plants, too, replanted each year. Will not others "take the confessional," and give us further light on this point?

What peaches are preferred, as a class, in the New York market, white or yellow fleshed? I have been told the former were. Truly, F. K. PHOENIX.

*Bloomington Nursery, Ill, Sept. 5, 1863.*

Is Hornet Raspberry uniformly hardy there? Have been informed on excellent authority that no imported sort as yet tested, could be depended on thoroughly to endure American winters.

[We are delighted that you have broken the ice, Mr. Phoenix. "White" grapes do not sell in New York as well as colored ones. They are not sufficiently known yet. Hartford Prolific is adapted to vineyard culture; and so are Allen's Hybrid and Creveling. Maxatawny must go farther south. We advise you to plant Creveling instead of the Hartford. It is about as early, and a great deal better. Your experience with the Delaware is that of hundreds of others. We hope they will stick in the pin. The white-fleshed Peaches are generally preferred. The Hornet is not uniformly hardy. There is no imported variety that does not need covering. Our replies are necessarily brief, but we hope to the point.—Ed.]



THE

# HORTICULTURIST.

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VOL. XVIII.....NOVEMBER, 1863.....NO. CCVIX.

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## Hints on Grape Culture.—XXXI.

WE resume our consideration of the short arm renewal system at the end of the fourth year. The first thing now to be done is the pruning. This is a very simple matter, and is quickly done. *Fig. 1* is a portrait of the vine as it now appears, except that the shoots that bore fruit are shown only a part of their length, as a matter of convenience. The pruning of the cane *h* consists in cutting it off at the dotted line *n*. The cane *g* will probably be strong enough to leave the full length of the stake, at the top of which it may therefore be cut off. It will thus be seen that two cuts complete the pruning. Nothing can be more simple; and the same process is continued year after year. The cane that is fruited one year is cut down to a base bud, to produce a new fruiting cane, so that the vine bears on alternate arms each year.

The cane *g* in *Fig. 1* is to be fruited this year its whole length, and is to be treated precisely as directed last month. The reader may have observed that the treatment of the laterals differs a little from the system first described. The reason of this is, that the vine requires more latitude in consequence of being confined to two canes. If pinching is carried too far, under such cir-

cumstances, root action receives a check, and the vine becomes peculiarly liable to mildew. The unchecked growth of the cane on the opposite arm, however, constitutes a safety valve, and the liability to mildew, in consequence, becomes very much lessened. It would be desirable, where this short arm system is adopted, to have the vines planted a little closer together than we directed for the double arm system. There is this advantage, however, in planting the vines four by six feet, that the short arm can at any time be converted into the double arm system.

We directed last month that the cane to be fruited should be temporarily bent down, in order to make the lower buds break strong. This object may be secured in another way when the cane is stout. This consists in twisting the cane around the stake, as shown in *Fig. 2*, and tying the end to prevent it from untwisting. It is done in a moment. A cracking noise will be heard while this is being done; but this need cause no uneasiness, as no harm will be done. It will be well, however, to perform the operation with some care at first, until practice gives the facility to do it rapidly and properly. Twining the cane around

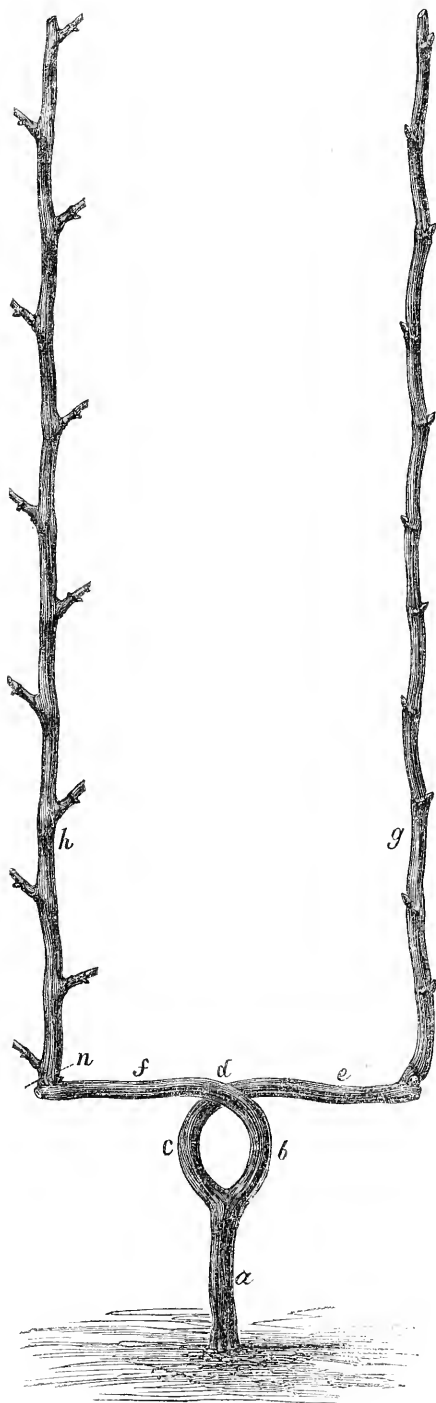


Fig. 1.

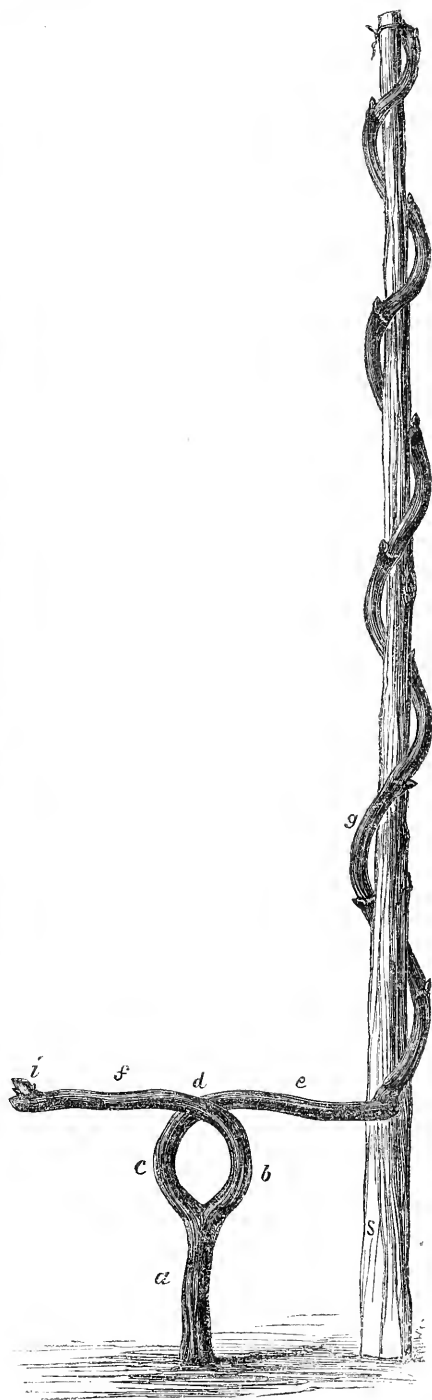


Fig. 2.

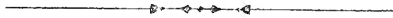
the stake will have the effect of retarding the flow of the sap, and the buds will swell slowly, but very evenly. The canes need not be untwined. We may remark, that in twining the canes the turns must not be too short. We have tried, in *Fig. 2*, to give the reader an idea of the degree of sharpness the turns should have. Twining must not be resorted to when the cane is not strong; it must, in that case, be bent down, as first directed. We may repeat here, the cane must not be fruited its full length if the growth is feeble; for in this case the bunches will not only be small, but will ripen imperfectly, and the vine itself will be more or less injured. Under favorable circumstances, however, the cane ought now to be strong enough to fruit to the top of the stake. The number of bunches of fruit to be left on each shoot must be determined by the condition of the vine, as explained in previous articles.

The repeated cuttings to which the canes are subjected will cause a knob to form at their base, and buds will form abundantly all over it. It will thus happen, as the vine grows old, that many shoots will start from this knob when the cane is pruned; but the reader will understand, of course, that all but one are to be rubbed off.

We have stated that the short arm renewal may be readily converted into the double arm system first described. It will not be out of place here to explain how

this is done. The operation is very simple. It consists in cutting the arms off at the points marked *b* and *c*. Several shoots will start from each stump. The two strongest must be selected, and the others rubbed off. They should, if possible, be selected from the outside of the stumps, where the letters *b* and *c* are placed. These shoots must be grown upright the first year, the laterals pinched in, and otherwise treated as heretofore directed for the formation of arms. These canes will be very strong, and the arms might the next season be laid down their full length; but it is better to form them only half their length at this time, for reasons before given. The reader will readily understand the subsequent treatment, if he has read our previous "Hints."

If it is determined to make a change, it would not be advisable to cut down all the vines the same season. A better way is to make the change gradually, or at least to carry it over three seasons, so that a portion of the vines may be in fruit each year while the change is going on. Thus if one third be cut down this year, there will be two thirds left to fruit. Next year another third may be cut down, and one third retained to fruit. The third year the remainder may be cut down, as the first third will then yield some fruit. In this way the change may be made without depriving one's self of fruit while it is going on.



## SCHOOL HOUSE AT IRVINGTON, ON THE HUDSON.

By MEAD & WOODWARD, Architects, etc., 87 Park Row, New York.

OUR architectural series would be by no means complete if devoted entirely to dwellings; and as the resources of an extensive professional practice in the arts which embellish and beautify our country may be largely made use of, we propose occasionally to vary our subjects.

A school-house is not a building which every one contemplates erecting, and yet a large proportion are, or ought to be, interested

in developing in structures of this class such architectural principles as shall make their impressions in early life, and influence future tastes.

This building is designed to accommodate about fifty scholars, being 25 by 40 feet, with a front projection 10 by 18 feet. In the basement is a large furnace and abundant accommodations for coal. The main floor is divided into school-room, two recitation rooms,

hat and coat room, wash closet with sink, and water closet, above which is a large tank, supplied from the roof. An outside cistern supplies cool drinking-water, the purest and healthiest water known, and renders the use

bell; indeed, nothing has been left undone that is calculated to promote the health and comfort of the pupils.

The partition between the doors to the recitation rooms is made in sections, and can be

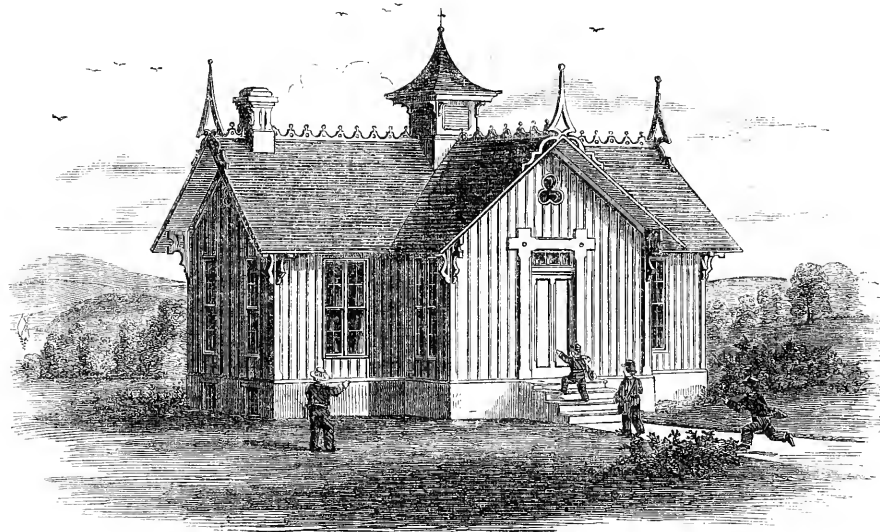


FIG. 42.—Perspective View.

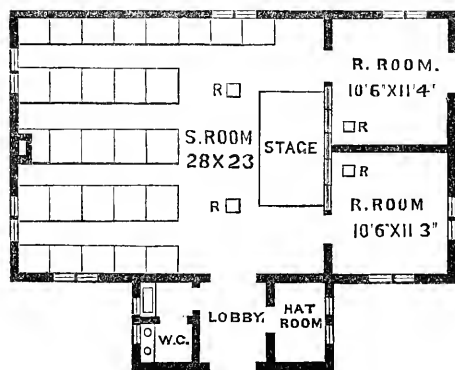


FIG. 43.—Principal Floor.

of ice unnecessary in summer. The height of all these ceilings is nearly fourteen feet, and each room is thoroughly ventilated; the belfry is provided with a one hundred pound

easily removed, thus making one large room for exhibition and lecture purposes. The stage, in this case, is to be placed at the left end of the room. The capacity of the build-

ing can be nearly doubled by occupying the entire floor as a school-room, and building an addition 12 by 24 feet directly in the rear, opposite to the front projection, for recitation rooms.

The situation of this building at Irvington on the Hudson, some twenty-five miles above the city of New York, is in a charming, healthy, and delightful locality; one made famous by the pen and residence of Washington Irving, and noted for its magnificent scenery, its views of river and mountain, and the fine taste displayed in landscape and architectural embellishments by those who have made their homes in this vicinity.

We have always thought that those educational institutions possess the most attractions that are so situated that all surroundings shall have a favorable influence; and there is nothing like example in early training. Bring up and educate a boy among those who know nothing of the refinements of life, away from the progressive examples of art and taste, in a tumble-down, unplastered, ill-heated and ventilated apartment, and he never can know, with all the aid of books and teachers, the same as one who has enjoyed associations of a higher order. School architecture has a meaning in it; there is value in proportion, harmony, beauty, light and shade, as applied to school buildings, that is not comprehended by all; and a recent writer says better than we can say it, that

"It is the duty of teachers, as well as parents and school committees, to see that the circumstances under which children study are such as shall leave a happy impression upon their minds; for whatever is brought under the frequent observation of the young must have its influence upon their susceptible natures for good or evil. Shabby school-houses induce slovenly habits. Ill-constructed benches may not only distort the body, but, by reflex influence, the mind as well. Conditions like these seldom fail to disgust the learner with his school, and neutralize the best efforts of his teachers. On the other hand, neat, comfortable places for study may help to awaken the associations enchainning the mind and the heart to learning and virtuous instruction with links of gold brightening forever."

This building was erected during the last summer's vacation, for Alfred Stebbins, Esq., who has for many years been successfully engaged in the cause of education, and who, with an able corps of assistants, has here opened the fall session. It occupies a portion of the grounds connected with his residence, and was constructed by Mead & Woodward, of New York, by contract, they being the lowest of five bidders. The time occupied from breaking ground to the final finish was thirty-eight days, the whole building being thoroughly complete several days before the expiration of the time agreed on.

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## C O U N T R Y H O M E S .

By MEAD & WOODWARD, Architects, etc., 37 Park Row, New York.

THIS design was prepared for erection in the vicinity of Goshen, Orange Co., N. Y., and the accommodation limited to a price not exceeding \$2500. It presents in hall, verandahs, and large parlor, some of the very necessary attractions of a country house, and is a good example of what can be done for the sum stated. While the plan is a parallelogram, and the roof free from hips and valleys, the general arrangement is such as to show considerable variety in outline, and

one, we think, that will have a pleasing effect.

Such houses, erected in the vicinity of New York, and many of our large cities, would add a large value to the ground they stand on, and pay a handsome rate of interest on their cost; better than any other class of building investments, as the supply is in nowise equal to the demand. It is so simple a matter, with present prompt and rapid railroad facilities, to invite a fair proportion

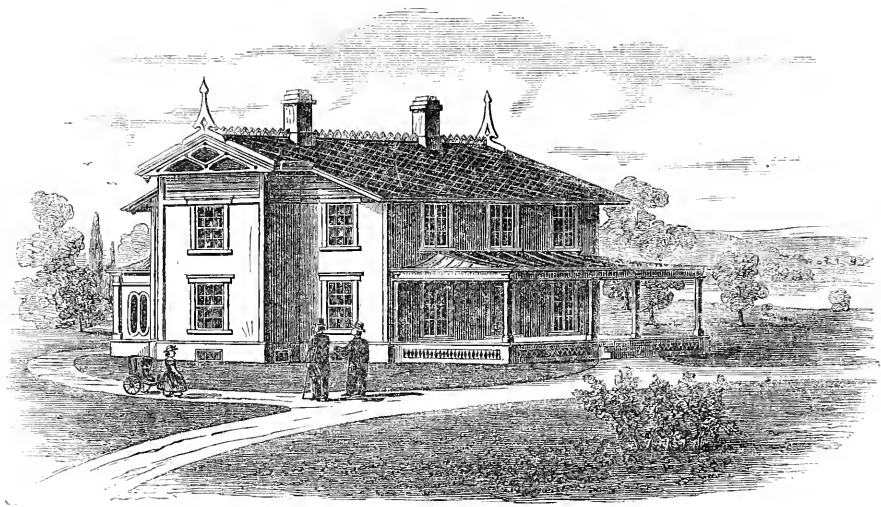


FIG. 44.—Perspective View.

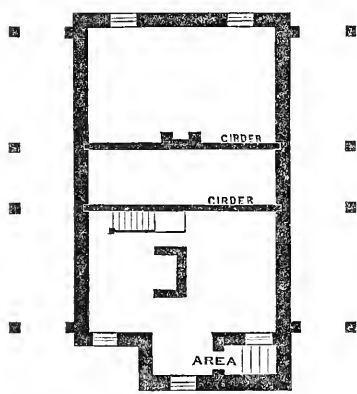


FIG. 45.—Cellar.

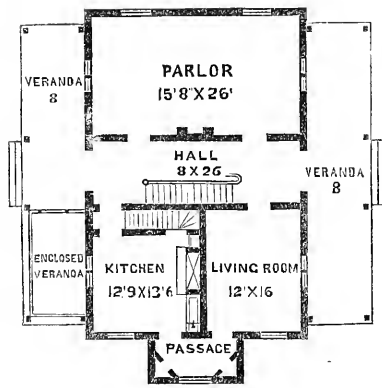


FIG. 46.—First Floor.

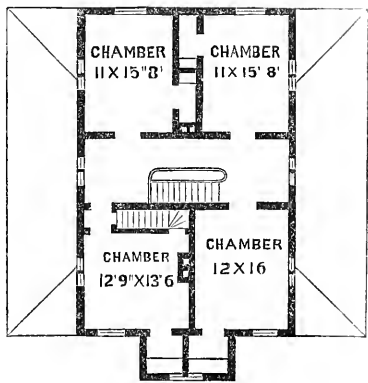


FIG. 47.—Second Floor.

of the young business men of our large cities to make their homes in the adjoining country, that we wonder capitalists and real es-

tate owners do not more frequently make money for themselves and others by erecting tasteful, low-priced suburban homes.

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## PRESERVATION OF WINTER PEARS.

BY R. S. S., NEWARK, N. J.

WINTER PEARS are a humbug! I have never yet succeeded in ripening a winter pear. I take all the pains in the world in putting my pears away for the winter, and when I look for them to ripen, they are all either rotted or shriveled up. They remain like so many stones until they begin to rot, or else shrivel, so that when I go to try their flavor, I find them tasteless, and tough as leather.

How common such remarks are among amateur pear-growers; in fact, it is an almost common experience. Disappointment in this regard is a thing of every-day occurrence, even among those who, with a lavish hand, have provided all the means and appliances for realizing largely from the winter pear. We have seen large portions of the orchard given to the very late varieties; we have seen costly structures in the shape of *fruit rooms*, put up even before the trees began to fruit; every thing done in a style "perfectly regardless," and yet heard the confession expressed in the commencement of this article. Why is this so? It can not be because winter pears will not ripen, for we all know they do. We see late in the winter or in the spring, temptingly displayed in the window of the fruit-store or restaurant, luscious, waxy-looking pears, but at a fabulous price.

We have known an amateur friend, an enthusiastic pomologist, go and buy some half dozen specimens at a dollar each, and then go home, sit down before a cheerful fire, and with silver fruit-knife in hand, proceed to discuss their relative merits, all through laudable curiosity, and a desire to understand the matter. All this goes to show that there is in the case either an immense difficulty, or an enormous amount of ignorance. We are inclined to think that the latter is the greater obstacle. And we propose, in this paper, to

throw out a few hints by way of suggestion to the amateur, to assist him in the care of his winter fruit.

And first, we would suggest to him not to be led into any such silly extravagance as a fruit-room. Such structures are very pretty things to figure in works on horticulture, to ornament strictly *fancy* places, and to aid in depleting a plethoric purse; but for any other than such persons as are largely engaged in the raising of fruit for a market, making a business of it, and giving their time and thought to the work, we consider that all the fruit-room needed can be found under the same roof that shelters the family.

The maturation of fruit is doubtless a philosophical study, and there are certain conditions of success, precisely as in other branches of science. These conditions being overlooked or neglected, failure is of course inevitable. And to ascertain these conditions we have only to go to nature herself. Take, for example, a tree hanging full of fall fruit, say the Urbaniste. At the moment we are writing the fruit is not mature. The pears have reached their full growth, yet are still very hard, and the stems unyielding; nevertheless, every day shows some slight change, chiefly in color; ripening is very gradually going on; but, per contra, you will find on the tree or upon the ground, some few specimens which are *prematurely* ripe. How is this? are not the conditions the same? Let us examine. On cutting and tasting, we find the natural flavor of the fruit, but not in perfection. Here is the cause: as we dissect we find a grub lodged in the specimen, or that some injury has been sustained. A chemical change has taken place in the juices, but the conditions are evidently wanting. The process, as we have said, is gradual; and as, with the summer and

fall varieties, the conditions are all supplied by nature herself, so we have only to profit by the lesson, and carry it out with the winter varieties, imitating nature, and following her motions as closely as we can.

Secondly. A condition of the very first importance, and without which others are of little consequence, is *care in gathering* the crop. The very late varieties should be allowed to hang on the trees as long as practicable. They are not as sensitive to injury from frost as the fall varieties, and need not be gathered so early. We are inclined to believe that a very common mistake is in gathering the crop too soon. The test of the proper time to take the fruit from the tree is the stem's parting freely from the branch upon raising the pear gently in your hand. If it parts easily, it is time to take the fruit; for otherwise it will soon fall by its own weight; but if it has to be torn away by force, and the stem broken, this condition is violated, and such fruit will in most cases either shrivel or rot. And not only should the proper time in gathering be observed, but the greatest possible care exercised in the handling. Every pear should be handled as gingerly as you can. Recollect that you expect every one of these to keep, and to be of great value in the late winter or early spring. Lay them down as if they were made of glass, and handle as gently as if you had hold of your first-born babe. Reject every thing like an imperfect specimen, for your labor and care will all be wasted upon defective ones. And now you have a fine field and subject upon which to exercise your skill and philosophy.

Thirdly. We have now to go back again to nature, and take a lesson from her. These gathered pears are like so many stones. They would make capital round-shot where a battery had run short of ammunition, and would stay a line of rebel infantry as effectually as lead or iron. It is evident, then, that the process which is to soften and render them fit for food, must be a most gradual and slow one. The next thought is, where shall they be put to undergo this process. Here is another stumbling block. We visited, a few

days ago, a friend who is enjoying his first year's experience as an amateur in the country, and was shown by him a fine lot of windfalls—Duchesse d'Angoulêmes, and other later varieties. He had them very carefully ranged on a carpeted floor in a bay window, through which the sun was streaming upon them with tropical fervor, in the vain hope of ripening them for use. They were beginning to shrivel most beautifully; we wish we could color our meerschaum with the same facility as they were being *done*. It is needless to add, we showed our friend his mistake, and he *saw* it.

As the process of maturation is slow, the fruit must be placed where no cause will interfere either to hurry or retard. It is a very good practice to carefully wipe each pear and wrap in paper, (common newspaper will do,) and then to pack in small boxes, using great care not to break off any of the stems; for we consider that much of the beauty of a well-ripened pear lies in a well-preserved stem, and that the disfigurement of losing it is about equal to a cat's being deprived of her caudal extreme. We prefer small boxes for obvious reasons; by small boxes we mean such as would contain from a peck to a half bushel. These boxes should now be placed in some dark depository, either a dry cellar or room, where the temperature is equable and cold. Not so cold, however, as to risk the congealing the juices of the fruit during severe cold weather, but what might be called a cool store-room, which does not feel the heat of the house, and the temperature of which is not liable to change as frequently as the apartments of the house which are heated; a mean temperature of say from 35° to 40°. The fruit packed away, each variety by itself, should be kept here until near the time of ripening, say within three or four weeks, consulting the books for the period of ripening of the several varieties. The pears should then be brought out, and placed in a room warmed as the rest of the house, and laid upon tables or shelves where they can have light and air, but where they will not freeze at night. If it be an inhabited room, which is warmed by fire heat, so much



the better. The pears will now color, and approach rapidly to the condition for eating, growing prettier every day. Such pears as the *Beurré d'Anjou*, under this treatment, will now become miracles of beauty; and so with all the other late varieties. They can be kept, and they are kept, and late in the season, when a pear is in our remembrance as among the delights that were, we have a luscious fruit ripened in its own natural time, and rewarding its possessor richly for all his care and trouble.

Before closing this article we would add, that an occasional looking after and turning over the fruit during the winter will do no harm.

These comprise, we believe, the conditions of preserving winter pears, and of bringing them to a state of perfect maturation. Let them be carried out by the amateur as above detailed, and we think he will cease to hold

the language with which we set out, and will say rather, with us, that he has discovered the secret.

[R. S. S. has here very clearly described the conditions under which winter Pears may be kept and ripened. There is no better place in which to keep them than a cool, dry cellar, possessed of the means of ventilation, and not subject to sudden or extreme changes. They may be ripened by bringing them, at the proper time, to the sitting-room, or any room where a fire is kept, and putting them on the shelves of a pantry or in the drawers of a bureau; but we have found them liable to shrivel and somewhat difficult to ripen in a room heated by a hot-air furnace. A good understanding of the conditions necessary to keep and ripen winter pears will enable most persons to supply them in his own dwelling; but if he grows pears largely for market, he must provide a suitable cellar.—Ed.]

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## PLANT HOUSES.—VI.

BY THE EDITOR.

WE have selected for illustration this month two houses that present some striking contrasts, their objects being as dissimilar as their general appearance. One is a *Green-house* and the other a lean-to *Hot Grapery*.

The first is a green-house that was designed for Dr. Butler, of the Retreat for the Insane at Hartford, Conn. The doctor had conceived the idea that a green-house might be made to serve a very important part in the treatment of the insane, having noticed the soothing influence of plants upon his patients, more especially the females. We have no doubt that his anticipations will be fully realized; for we can scarcely conceive of any thing better calculated to heal the "mind diseased," than daily intercourse with these voiceless, but gladsome children of Nature.

*Fig. 1* is a perspective view of the house. It is twenty-four feet wide and seventy-five long. It has a low, curved roof, and side sashes three feet six inches high. We do not make these roofs low for the sake of

architectural effect, though this point is certainly gained; but rather for the sake of the plants, a low roof, in this respect, possessing incalculable advantages over one that is steep. When attention is once generally fixed on this point, plant growers will not be slow to acknowledge the superiority of the low roof. It has often surprised us that gardeners will assume a great deal of unnecessary labor for the sake of an old prejudice. Some of them are slow to avail themselves of improvements that not only lessen their toils, but bring greater certainty and pleasure to the pursuit of their profession. Others, again, are quick enough to avail themselves of every facility brought within their reach. We could wish that the latter class might multiply rapidly.

One of the prettiest features about this house is its rounded ends. The pitch of the roof and the width of the house are such, taken in connection with the circular ends, that all the lines flow into each other with

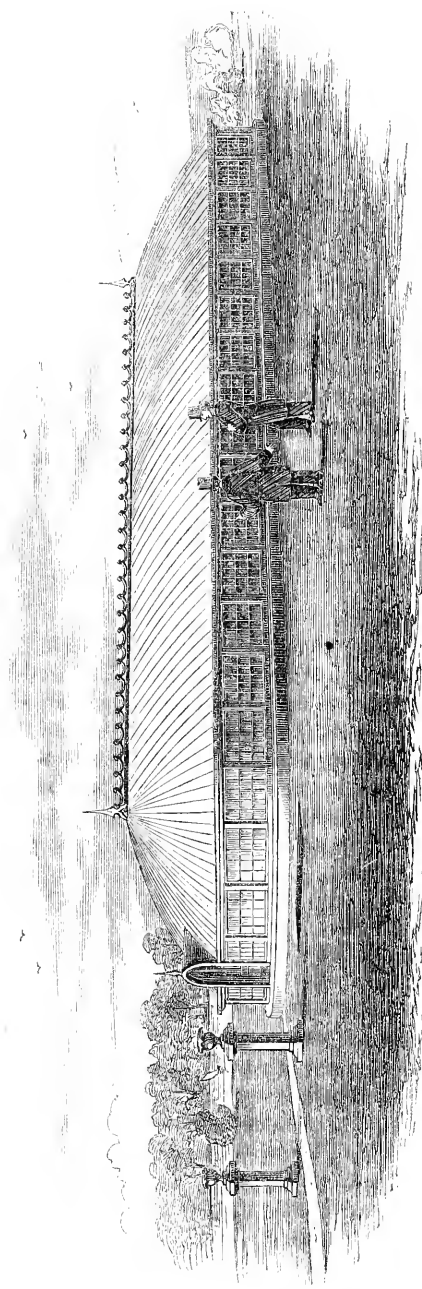


FIG. 1.—Perspective View.

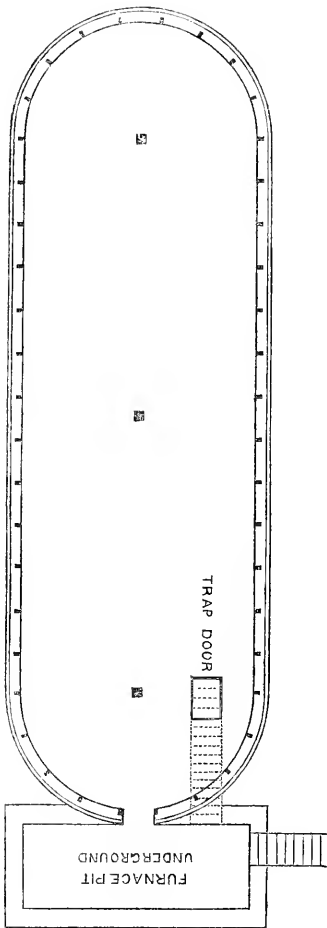


FIG. 2.—Ground Plan.

the utmost harmony. These different parts were studied with reference to producing this result, and we think it has been done with some degree of success. The finials, the ornament along the ridge, and the entrance door, are all in keeping with the rest of the structure. We shall be excused for saying that we consider it a beautiful building, with an expression of noble repose that will strike most beholders. When finished, we think the people of Hartford will feel proud to have such a house in their midst, and we hope they will not be backward in rendering Dr. Butler such further assistance as he may need for its completion. It will not do to object to the style of the house, and say that one less expensive should be erected; for such an objection would be fatal to the purpose the doctor has in view, the restoration of a diseased mind to its normal condition. To do this in the manner proposed, he must not only affect the mind favorably, but deeply, and produce none but pleasurable emotions; he must therefore have a house which is beautiful in all its lines and proportions, and one in which plants may be grown in their greatest perfection, so that the house, from whatever point viewed, may produce a marked and happy impression. No common, ill-designed structure will do this. Let him, therefore, by all means have the best house that experience and good taste can design, for no person can tell what beneficent results this experiment may produce.

*Fig. 2* is the ground plan. This presents some peculiarities. The house being designed for the use of the insane, it was desirable to place the heating apparatus out of their reach; the boiler is therefore placed under ground. For this purpose a vault of sufficient size to hold the boiler and several tons of coal, is built under ground in front of the house. It is substantially built of brick, and arched over. The smoke shaft is carried up through the roof, and finished above ground in the form of a column or pedestal, surmounted with a vase, as seen in *Fig. 1*. To harmonize the grounds, and conceal the purpose of this column, another is

placed on the opposite side of the path. In summer, these vases will be filled with plants, and the columns are intended to be covered with vines, thus making them subserve an ornamental purpose. There are two entrances to the boiler vault, one from within by a concealed trap-door, and the other from without. The house will be heated by hot-water pipes.

There will be neither shelves nor tables in the house. The plants will be set either on or in the ground, and the whole interior made to resemble as much as possible a flower garden. The plants will thus be easier seen, better enjoyed, and more appreciated than if placed either on tables or staging. Nothing can be in worse taste than the staging commonly found in green-houses and conservatories; and we have never seen any good reason assigned for its use, except in some old-fashioned, steep-roofed, lean-to house. We look upon it with great disfavor. In any well-designed house, the plants look and grow infinitely better upon flat tables; and a large class of plants will grow even better upon the earth floor of the house. Staging and paving the floors of green-houses we should be glad to see speedily numbered among the things of the past.

Our next example is a lean-to grapery for early forcing. It was designed for a gentleman in Connecticut, but is not yet built.

*Fig. 3* is a perspective view. It runs east and west, and is designed to correspond in a measure with another house on the place, though the roof of this is much flatter. There are no side lights. Ventilation is effected by openings along the ridge, and by the sashes over the doors, which are hung for the purpose. The roof is continuous, and both ends of the house are glazed. Without being pretentious, it is a neat and pretty house of its kind.

*Fig. 4* is the ground plan. The sills of the front or glass part rest on brick piers, to allow the roots of the vines to run out, the border being both in and outside the house. A wooden partition on the north side of the walk divides the house into two unequal

parts, the north being used for a potting shed, tool house, etc. It is about equivalent to so much waste room. This apartment is furnished with tables, etc., and is well lighted by windows at the side and ends. A water tank is conveniently placed in the middle. In the northwest corner is the boiler pit.

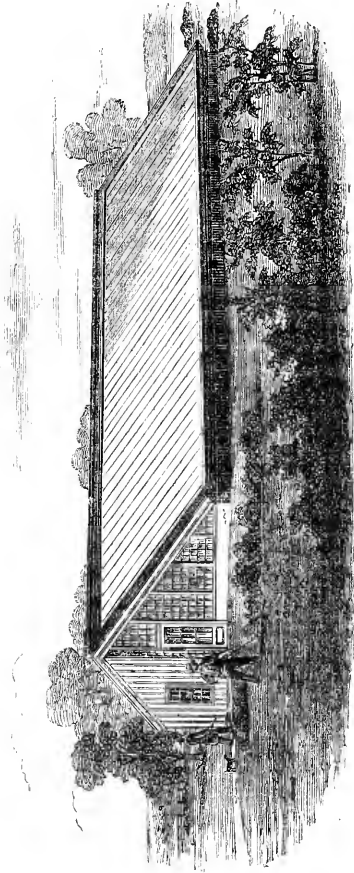


FIG. 3.—Perspective.

This is sufficiently large to hold coal, and is furnished with a chute for throwing it down. The grapery is to be heated by four rows of pipes, the object being to force early.

Fig. 5 is a section, showing the arrangement of pipes, walk, etc.

The house is a good one, and if well managed will not fail to yield satisfactory results.

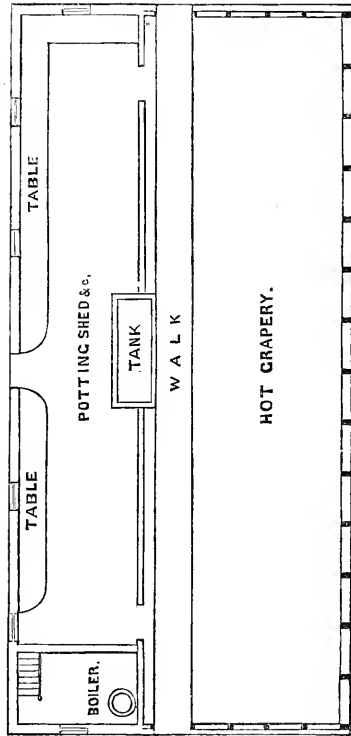


FIG. 4.—Ground Plan.

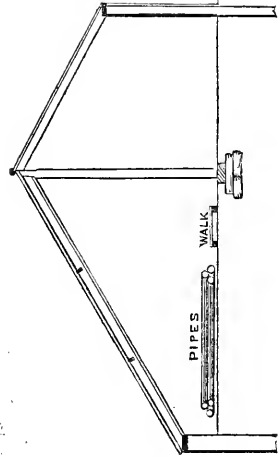


FIG. 5.—Section.

PLOWING ORCHARDS—ACTION OF LIGHT.

BY NOVICE, PLATTEKILL, N. Y.

A FEW months ago, while too indisposed to labor, and too well to be idle, I ventured to suggest some modification of one or two of the rules laid down in your journal for the management of orchards; and likewise took the liberty to criticize some of the remarks of your correspondent, P. G. Bertolet, published in the third number of the current volume; hardly expecting, however, that my essay would claim that notice that your courtesy has given it, or elicit a response from your correspondent.

I should have noticed his reply in the seventh number before this, but for sickness in my family, and other causes beyond my control. I have nothing to add on the subject of plowing orchards, except that, if friend Bertolet's soil is of such a texture as to permit the rootlets of his trees to penetrate it easily, and to furnish them with moisture from beneath by capillary attraction, when the clouds withhold it, it is a saving of labor which my gravelly loam imposes on me, both in orchard and cornfield.

As to the subject of light, I clearly admitted its influence on vegetation, but confined that influence to the leaves, thinking that Nature had intended its exclusion from the roots, seeing she plants them beneath a covering which I supposed to be opaque. We perfectly agree, too, that light is necessary to the process of assimilation; but which are the assimilative organs is a question upon which we may differ. Friend Bertolet quotes Professor Wood as authority, and perhaps I should be presuming too much to contradict the opinion of one standing so high in the estimation of the scientific world. As my object in writing is not so much to teach as to be instructed, not so much to sustain preconceived opinions as to elicit truth, permit me to ask friend B. a few simple questions.

1. Is there any organic change effected in the roots of a tree by substituting for its natural branches, those of another variety, or, in other words, by budding or grafting?

2. If not, would not the spongioles of the quince root, if they are the assimilative organs, elaborate the materials that constitute the quince, though the branches of the Bartlett pear might be growing over them? Or should it happen that pear and quince branches were growing on the same root, how would the spongioles furnish the necessary aliment for each, through the same pores?

I would ask, too, whether the examples your correspondent has adduced to prove the pervasive properties of light, is conclusive evidence that it penetrates not only the darkest cellar, but even the solid lime rock. With regard to the first, although the nitrate of silver, or other material with which the photographic plates are coated, is suddenly acted upon by light, as well as by "electricity and solar or terrestrial heat," does that prove that the impression would not be *gradually* effected by electrical and calorific agency without the light, seeing we have no evidence that light was present in that *darkest* cellar?

As to the second example, although it may be admitted that light is necessary to the development of the animal organism, yet we ask for proof that the frog quarried from the lime rock was any thing other than a fully developed frog, when, during one of its annual hibernations, it became so deeply immured in calcareous mud, as ever after to be beyond the resuscitating influence of summer sunbeams, until it was knocked into daylight by the geologist's hammer. I, too, have disinterred from rocks, whose periods of deposition date far back of the old red sandstone, not frogs, but trilobites, orthoceratites, and other animal organisms, not alive, but well developed, never dreaming, however, that they had grown up there, precluded all access to any thing that could even sustain life, except moisture and infinitely attenuated light.

Light falling upon a material body is in part reflected, partly absorbed; and if the

atoms of that body be so arranged as to admit of it, a part will be transmitted. What becomes of the light which is absorbed? Sir John Herschel responds to the query, "It merges in the more general one, what becomes of motion? And the answer, on dynamical principles, is, that it continues forever. No motion is, strictly speaking, annihilated; but it may be divided, and the divided parts made to oppose, and, in effect, destroy one another."

Though that subtle element, ether, whose undulations give us the sensation we term light, probably pervades the densest material, yet it would seem that the ultimate atoms of some bodies are so arranged as to divide the vibratory motion, caused by a luminary, and cast the divided waves of ether against each other, in opposite directions, and with equal velocities, and so, as Herschel observes, they destroy one another. Hence, probably, the reason why a film of metal one thousandth of an inch in thickness will totally obstruct a ray of light, though the atoms of the metal easily change their relative position, giving it elasticity, while a diamond of one hundred times that thickness will transmit nearly all the light, though no sensible mobility exists among its atoms.

We hope that friend Bertolet will follow this interesting subject in other of its ramifications when he has leisure, for its consideration, either in an economical, intellectual, or moral point of view, perhaps, would not be irrelevant to the high aim of your interesting journal. It would be a waste of space in your columns for me to dilate upon its benefits in the vegetable or animal economy, as I could throw but very little light upon its mysterious operations, but would be pleased to learn from those whose facilities for scientific research enable them to show us the causes of phenomena that we every day behold, thereby enabling us to apply some of the laws that govern this wonderful agent, to the advancement of our noble art, with as much reliance as the astronomer does the law of refraction to the investigation of far-off worlds. The

more we can combine intellectual with physical enjoyments, the more do we elevate our condition as men. And what, of all subjects, either of a material or immaterial nature, religion excepted, is better calculated to furnish intellectual pleasure than a contemplation of the vast, the magnificent system of suns, of planets, and of satellites by which we are surrounded; whose direct or reflected light, though diminished by inconceivable distance, reveals to us their being, their positions, and mutual relations. And little less is our admiration excited, when, through the same medium by which we behold the stupendous scale upon which the universe is built, we descend into the very minute among created things. Here, too, we behold beauty and order, as well as vitality and enjoyment, among beings so remote, that were it not for that simple law, the refraction of light, we should never have suspected their existence.

Exquisite indeed are the pleasures of vision, and very refined the intellectual enjoyments dispensed to us through the medium of light; and yet, if satisfied with these, we fall very much short of the blessing it was intended to confer.

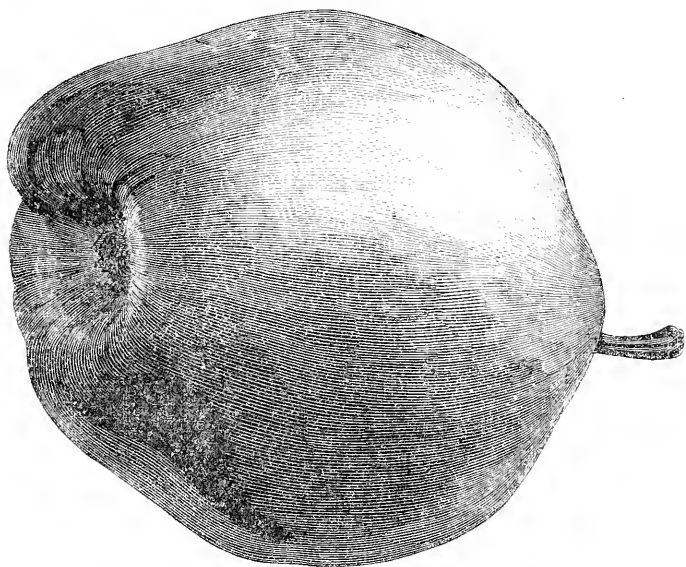
The contemplative mind, while absorbed in this beautiful theme, feels an impulse that lifts him upward to the great Source from whence emanate the fountains of light, and is wont to admire and adore the power, the wisdom, and goodness that spake into existence luminaries innumerable, and launched them on that boundless ocean of ether, whose tiny waves are not only essential to our very being, but delight our vision with all the varied, the gorgeous coloring of celestial and terrestrial nature.

[We are very much pleased to hear from "Novice" again. He has opened a very interesting subject indeed; but as it is intended for Mr. Bertolet, we must remain silent till he has answered these queries. We may remark, however, that the article of "Novice" contains a good deal of sound philosophy. Now, Mr. Bertolet, will you have the goodness to respond?—ED.]

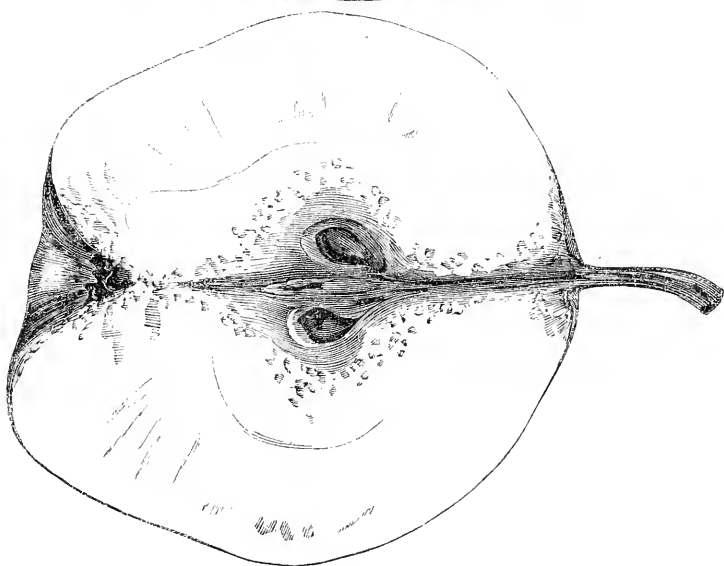
## CHAUMONTEL PEAR.

BY THE EDITOR.

THIS is an old French Pear of variable quality; sometimes quite good, and at others very poor. It is a good winter cooking pear; a red cheek. *Stalk*, about an inch long, inserted a little on one side, in a moderately deep, irregular cavity. *Calyx*, partially



CHAUMONTEL PEAR.



it is seldom sufficiently melting to eat out of hand.

*Size*, large. *Form*, irregular pyriform. *Skin*, yellowish green, covered with russet, and often

closed, set in a deep, coarsely ribbed basin. *Flesh*, rather dry, gritty, but sometimes sweet and aromatic. *Quality*, good. *Season*, from November to March.

## A FRUIT CABINET.

BY THE EDITOR.

THIS is the season when most persons who have a surplus of fruit, especially of grapes, are looking about for some means of preserving it. Having just seen in the hands of Dr. Grant a capital design of what we may call a *fruit cabinet*, we requested the use of it, and the request was kindly complied with.

*Fig. 1* is a perspective view of the cabinet open. *Fig. 2* is a view of the same closed. It is peculiarly adapted to the winter preservation of grapes. It may be made of pine, or more costly wood, as desired, or of any size. The design shows a cabinet four feet high, three feet wide in front, and two feet wide at the sides. The cover is movable, being hung on hinges, as is also the door in front. The drawers are to be made deep enough to hold the bunches without touching the drawer above; say from four to six inches. The bottom of the drawer is formed of slats laid a quarter of an inch apart. It is a very simple affair, which any carpenter can make.

The fruit cabinet must be placed in a room of a low, equable temperature; one not warmed by the sun's rays or artificial heat. The grapes selected should be the late keeping kinds. They should be gathered when perfectly dry, and under no circumstances while the dew is on them. Careful handling is indispensable, so as not to bruise them or rub off the bloom. Each bunch should be carefully looked over, and all the decayed and imperfect berries removed with a pair of grape scissors. Cover the bottom of the drawer with paper, and on this lay the grapes

so that the bunches will not touch each other. The bunches must not, of course, be placed on top of each other. When the drawers are filled, the cabinet must be removed to such a room as described above, if not already there. The top and side door may remain partly open till the temperature of the room gets to be quite cool, when both must be tightly closed; though it will be prudent to close them at nights even before this. The cabinet is to be opened only to remove the fruit or examine its condition. It should be looked over occasionally, and all decaying berries removed. If there should be danger of freezing at night, a thick woolen blanket should be thrown over and around the cabinet, which will be sufficient to prevent any ill consequences. On warm days the room may be ventilated, but the cabinet, at such times, must not be exposed to a draft of air. The cabinet itself will receive sufficient ventilation in removing the fruit from time to time for use, and in looking it over for decayed berries. If often exposed to a current of air, the berries will shrink up; the object, therefore, should be to keep every thing as quiet as possible. The fruit should not be handled more than is absolutely necessary. Having kept grapes in boxes and drawers on precisely the principle involved in this cabinet, we have no doubt of its being a convenient and most excellent contrivance. Winter pears may be kept in this way as well as grapes.

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 NEWBURGH BAY HORTICULTURAL SOCIETY.

BY THE EDITOR.

THE annual exhibition of this Society opened at Newburgh on the 29th of September, and continued three days. It was a gala time for the people of Newburgh. We have seldom seen an exhibition in which the fruit was so uniformly good; and this

may be said to be its distinguishing feature. This was not to have been expected at the end of a season so generally unfavorable to the perfection of the fruit crop; but fruit growers around Newburgh pay special attention to their fruit, and no doubt gave



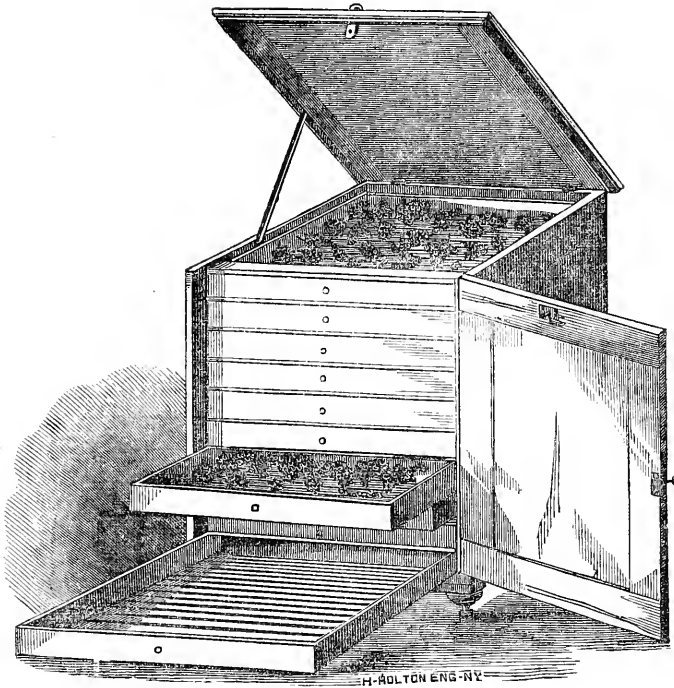


FIG. 1.—Fruit Cabinet, open.

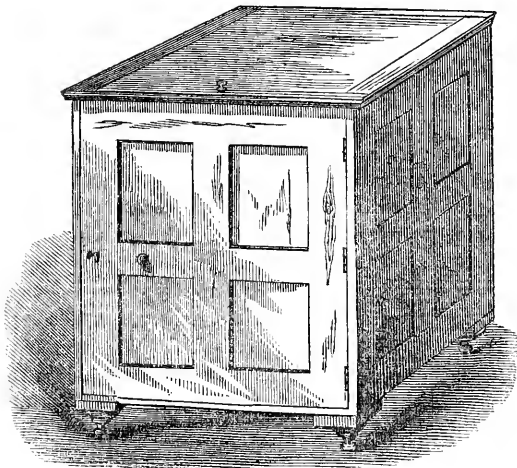


FIG. 2.—Fruit Cabinet, closed.

particular attention to the production of fine specimens for their exhibition; at all events, this was the result we saw on the well-filled tables. The exhibition room is a good one, as far as it goes; but there is not enough of it for such displays as can be made in Newburgh.

Notwithstanding a bad season, the present show was a better one than that of last year, as a whole. There were not so many apples, but there were more pears, and they were very fine. The display of native grapes was remarkably fine, and very large. There were more and better foreign grapes than were shown last year, but still not so many as we expected. We are inclined to think that the extensive culture of the Delaware has something to do with this. Large and handsome bunches of Allen's Hybrid were shown, well-ripened, and much finer than we have seen elsewhere. Clusters of Union Village of magnificent proportions were sent from Poughkeepsie, but were excluded from competition by the rules, as was also the case with several other fine samples of fruit. But the great feature among the grapes was the Delaware, which was shown in great profusion, and in very perfect condition. Some idea may be formed of the quantity, when we state that there were some twenty competitors for the single dish alone. There were samples also of Catawba, Isabella, Concord, Diana, (very fine,) Creveling, To-Kalon, Garrigues, Elsingburgh, Hartford Prolific, Rebecca, and others. The Society has reason to feel proud of its fine show of grapes, which we have seen nowhere equaled.

The apples were more numerous and better than could have been expected. Dr. Shelton made a very fine show, but not for competition. A handsome plate of Northern Spy took the first prize for table apples, and a plate of Newtown Pippins, almost as good, received the second. There were many other plates scarcely inferior to these. For the best collection of fruit the Society offered a splendid fruit piece, painted in oil by Mr. Tice. It was awarded to Mr. Downing, and could not have fallen into better

hands. Why can not more prizes of a like kind be offered by Horticultural Societies? Nothing could be more appropriate, and nothing, in our opinion, better calculated to bring forth a spirited competition. The Newburgh Society has set an example, in this respect, which we should be glad to see followed by others.

If the Apples were good, the Pears were even finer. Most of the samples would have been considered fine in a good season. Some kinds, however, such as the Flemish Beauty, were generally deficient in size; yet there were some plates of the Flemish Beauty quite up to the average, especially those exhibited by Mr. Palmer and Mr. Woodward. The Seckel, Beurré Gris d'Hi-ver Nouveau, Beurré d'Anjou, Beurré Diel, Paradise d'Automne, Belle Lucrative, Bartlett, and some others, were very large and fine. The Wilmington, from Mr. Downing, was of good size, and in all respects delicious. A noticeable feature was the collection of fruit from Mr. Leroy, of Angers, France, elsewhere alluded to. It was presented by Mr. Carpenter, of New York.

The display of Vegetables was large and very good. We must again compliment Mr. Findlay for the good taste shown in the arrangement of his vegetables. Good vegetables like his, arranged with taste, can be made a very attractive feature; and even those not of the best quality will look all the better for it. Potatoes were quite a feature in the vegetable department. A lot of Flukes from Mr. Downing were very beautiful. They are not only beautiful, but one of the best potatoes grown. Carrots, Beets, Salsify, Onions, Cabbage, etc., were shown in good condition. Egg Plants were large, but mostly not well colored. The best were from a lady, and seem to have been overlooked.

Newburgh would seem not to be famous for flowers, to judge from its exhibitions. The display of plants was small last year, and even smaller this. Those shown, however, had the merit of being very good. The collection of ornamental-leaved plants from Mr. Brinckerhoff was very fine. There

ought to have been at least half a dozen such collections. The cut flowers, bouquets, and designs were all very good. We would suggest to those who exhibit bouquets, that they take Mrs. Downing's style as a model. We never pass a bouquet without hearing a thousand sweet little voices crying to us to set them free. We implore you, by all that is beautiful, not to put these dear little creatures in such vile bondage.

Before closing, we wish to offer a few words of advice in regard to horticultural exhibitions. It is a matter that concerns exhibitors quite as much as the society. We allude to the want of system or arrangement in placing articles for competition. Each class of articles should be placed by itself on the tables; for example, all the entries of single plates of fruit should be placed side by side; and so of collections. The judges can then make their examinations and comparisons with some degree of satisfaction, and with a fair hope of making just decisions. With the ordinary arrangement they can do nothing of the kind, however painstaking and careful they may be. We know that some exhibitors insist upon having their articles all together; but in this they commit a great mistake, and one in which they should not be indulged. When a man exhibits, he must comply with the rules. On the present occasion the articles were scattered about a large room very promiscuously. We were one of the judges on fruit, and we have hardly yet recovered from the fatigue of racing about the room to find the articles entered for competition. One of our companions broke down completely, and towards the last we had to request that the articles might be picked out for us. We should not have minded the labor so much, but the difficulty, if not impossibility, of properly comparing samples of fruit a hundred or more feet apart, was very annoying. Now look at some of the results. In the evening we returned to the exhibition, and spent an hour in looking about. In so doing, we discovered several fine lots of apples, pears, and grapes that the judges had not

seen at all. One exhibitor had divided his collection of grapes into two parts, with other fruit between, and in so doing lost the first prize; but we can not say that we feel much sympathy for him, though mortified at the result. These oversights are in no respect the fault of the judges; they are mainly the fault of the exhibitors themselves. We mention these things in order that the Newburgh and other societies may profit by them.

We subjoin a list of prizes:

#### FRUITS.

For best and most interesting display, Charles Downing. Painting by Tice.

Second best, O. S. Hathaway. Silver Goblet.

Third best, Roe Hasbrouck, \$5.

For best basket of fruit, James H. Ricketts, \$5.

Second best, Thomas H. Roe, \$3.

Third best, D. Smith, \$2.

For best collection of apples, 19 varieties, W. H. Armstrong, \$8.

Second best, 15 varieties, W. Johnson, \$5.

Third best, 12 varieties, N. Barnes, Jr., \$3.

For best dish of apples, Northern Spy, Alexander Palmer, \$3.

Second best, Newtown Pippin, W. H. Armstrong, \$2.

For best collection of pears, 37 varieties, Henry W. Sargent, \$8.

Second best, 12 varieties, Mrs. Wm. Kent, \$5.

Third best, 16 varieties, Wm. A. Woodward, \$3.

For best dish of pears, Seckel, Mrs. Wm. Kent, \$3.

Second best, Beurré Gris d'Hiver Nouveau, Henry W. Sargent, \$2.

For best collection of hardy Grapes, 10 varieties, E. H. Clark, \$10.

For best 5 varieties of native grapes, D. Brinkerhoff & Co., \$8.

Second best, Alexander Palmer, \$5.

Third best, James H. Palmer, \$3.

For best dish of hardy grapes, Delaware, John Hoag, \$6.

Second best, Allen's Hybrid, John Hoag, \$3.

Third best, Delaware, Wm. Johnson, \$2.

For best 5 varieties of grapes, grown under glass without artificial heat, Thomas Wade, \$8.

Second best, Wm. R. Green, \$6.

For best dish of peaches, Late Admirable, Mrs. Wm. Kent, \$5.

Second best, Benjamin Carpenter, \$2.

For best quinces, Mrs. Wm. Kent, \$3.

Second best, Thomas Buckmaster, \$2.

For best Cranberries, Geo. W. Cornell, \$3.

For best Muskmelons, William D. Humphries, \$3.

Second best, Wm. A. Woodward, \$2.

Best Watermelons, Alexander Michie, gardener to Col. Howland, \$3.

Second best, Thomas Turnbull, gardener to C. M. Wolcott, \$2.

#### VEGETABLES.

For best collection, Thomas Ayres, gardener to Wm. L. Findlay, \$12.

Second best, Thomas Turnbull, gardener to C. M. Wolcott, \$8.

Third best, Alexander Michie, gardener to Col. Howland, \$6.

For best beets, Thomas Ayres, gardener to W. L. Findlay, \$2.

Best Drumhead Cabbage, Thomas Buckmaster, \$2.

Best Cauliflowers, Alexander Michie, gardener to Col. Howland, \$2.

Best blanched Celery, Wm. D. Humphries, \$2.

Best Carrots, J. H. Moore, \$2.

Best Egg Plants, Thomas Turnbull, gardener to C. M. Wolcott, \$2.

Best peck of Potatoes, H. T. Pierce, for White Mercers, \$2.

Best Squashes, Wm. D. Barnes, for Boston Marrow, \$2.

Best Tomatoes, J. H. Moore, \$2.

#### FLOWERS.

Premium for pot plants not awarded, as it was understood to be offered for flowering plants only, and did not include the fine collection of variegated-leaved plants exhibited by D. Brinckerhoff & Co.

For best large bouquet, for vase or parlor, Thomas Ayres, gardener to Wm. L. Findlay, \$5.

Second best, D. Brinckerhoff & Co., \$3.

Third best, Mrs. Wm. Kent, \$2.

For best hand bouquet, Wm. D. Humphries, \$3.

Best Dahlias, 26 varieties, D. Brinckerhoff & Co., \$2.

Second best, Thomas Turnbull, gardener to C. M. Wolcott, \$1.

For best Roses, D. Brinckerhoff & Co., \$2.

Second best, J. H. Ricketts, \$1.

For best Asters, Thomas Ayres, gardener to W. L. Findlay, \$2.

For best Fuchsias, 24 varieties, William D. Humphries, \$2.

Second best, 30 varieties, D. Brinckerhoff & Co., \$1.

For best Verbenas, 48 varieties, D. Brinckerhoff & Co., \$2.

For best ornamental arrangement of flowers, L. W. Gardiner, \$2.

Second best, Wm. D. Humphries, \$1.

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### GRAPE REPORT FROM WATERLOO, N. Y., LATITUDE 43° N.

BY F. C. BREHM.

I HEREWITH send you my report on native grapes for 1863. I would also add a few remarks on the state of the weather for 1863. The weather for the Grape was very favorable until about the 10th of July, the vines at that time being two weeks in advance of

1862, and I was indulging in the hope of an early vintage, when my hopes were soon dispelled with terrific showers of rain, accompanied with a hot and damp atmosphere, the thermometer for nearly six weeks standing at 90° in the shade, and heavy showers of

rain nearly every other day from the 10th of July to the 1st of September, producing mildew, leaf blight, and rot in abundance. Under these conditions were my grapes grown, and I hope the readers of the *HORTICULTURIST* may be benefited by this report, as the statements herein made are correct, and were taken down from day to day, without any guess work, and can therefore be relied on. They are placed in the order as they ripened.

1. *Hartford Prolific*. Leaf May 12. Flower June 17. Color Aug. 17. Ripe Sept. 1. Quality poor. Drops badly from bunch after being picked a day or two. Never ripens or becomes sweet to the center. Allowed some to hang till Oct. 1. Although the berries were so ripe that they shriveled up, still the pulp was hard and sour.

2. *Delaware*. Leaf May 17. Flower June 17. Color Aug. 21. Ripe Sept. 11. Mildew on leaf Sept. 5, light. Quality first best. This beautiful grape can not be recommended too highly for its earliness, hardiness, good quality of the fruit, and its lateness in flowering, thereby escaping late spring frosts, and its resistance to mildew, ripening its fruit without the loss of a berry by rot or mildew.

3. *Rogers's Hybrid*, No. 19. Leaf May 10. Flower June 10. Color Aug. 21. Ripe Sept. 18. Leaf blight light. Quality good, producing large clusters and berries, resembling Black Hamburgs. Would recommend it to grape growers as a first class black grape, being hardy, ripening early, and good quality, with large size of berries and bunches.

4. *Diana*. Leaf May 12. Flower June 13. Color Aug. 29. Ripe Sept. 20. Quality first best, or next to Delaware. This was the healthiest variety out of thirty-two; never mildewed or suffered the loss of a berry by rot.

5. *Allen's Hybrid*. Leaf May 20. Flower June 19. Color Aug. 29. Ripe Sept. 20. Quality best. Tender, without any pulp, when ripe. No doubt the best white grape we have. Mildewed badly on leaf, but ripened its fruit perfectly.

6. *Rebecca*. Leaf May 17. Flower June

18. Color Aug. 27. Ripe Sept. 20. Quality best. Mildewed lightly on leaf.

7. *Union Village*. Leaf May 14. Flower June 15. Color Aug. 27. Ripe Sept. 25. Black rot lightly Aug. 3. Quality good.

8. *Rogers's Hybrid* No. 4. Leaf May 13. Flower June 17. Color Aug. 22. Ripe Sept. 25. Quality moderate, or as good as Isabella. Drops its foliage before fruit is perfectly ripe.

9. *Concord*. Leaf May 12. Flower June 19. Color Aug. 26. Ripe Sept. 25. Quality poor, or like Hartford Prolific. Not worth cultivating by the side of Delaware, Diana, and Rogers's Hybrid No. 19. Leaf blight lightly.

10. *Isabella*. Leaf May 12. Flower June 14. Color Aug. 29. Ripe Sept. 28. Quality moderate. Leaf blight badly. Failed to set its fruit well, the clusters being filled with small green berries the size of peas and larger. Not fit for cultivation any longer where Delawares can be had.

11. *Clinton*. Leaf May 17. Flower June 10. Color Aug. 27. Ripe Sept. 28. Quality said to be good for Claret wine. Not fit for table use.

12. *York Madeira*. Leaf May 20. Flower June 19. Color Aug. 29. Ripe Sept. 28. Quality not good for table. Poor bearer. May do for wine.

13. *To-Kalon*. Leaf May 17. Flower June 18. Color Sept. 5. Ripe Sept. 28. Black rot light Aug. 20. Quality best. This is the best black grape in quality that I am acquainted with. Its only fault is liability to rot in some seasons.

14. *Clara*. Leaf May 19. Flower June 29. Color Sept. 20. Ripe Oct. 8. Mildew on Leaf Sept. 15. Quality good, or next to Rebecca and Allen's Hybrid.

15. *Anna*. Leaf May 17. Flower June 16. Color Sept. 17. Dry rot Aug. 29. Not perfectly ripe yet. Berries dropping badly from bunch. Not fit for cultivation here.

16. *Catawba*. Leaf May 17. Flower June 19. Color Sept. 12. Ripe Oct. 12. Rotting badly.

The following varieties have not matured

their wood this season: Isabella, Catawba, Clara, Cuyahoga, Rebecca, and Union Village; and unless well protected this fall by laying down and covering well with earth, will be found frozen next spring.

[We are much obliged to you for this

model report. It is admirably arranged. We are convinced that you have not got the true York Madeira. That is a grape of good quality, but a poor bearer. Yours is not only poor, but it does not come in in the right place. Though a good grape, one vine is enough for any collection.—Ed.]

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## THE HYACINTH IN ROOMS.

BY THE EDITOR.

As the season for planting the Hyacinth is not yet past, a few hints as to the best mode of growing it may be acceptable to some of our readers; and these may be taken as an answer to one of our correspondents.

The best soil for the Hyacinth is one that is light, porous, and rich. If not already light and porous, it may be made so by the addition of sand. The best manure is that which is old and well decayed. The Hyacinth is grown in water, in moss, in the garden, and in pots.

*In Water.*—When grown in water they are placed in glasses made for the purpose. There are two styles of glasses, one being long, and the other short, with an expanded bottom. The latter are much the prettiest. A valuable adjunct is Tye's support, which is placed in the rim of the glass, and holds the leaves and flower stalk firmly in their place. Having procured glasses, fill them with soft rain water, in which put two or three small pieces of charcoal, which will obviate the necessity of changing the water as often as would otherwise be necessary; besides, the bulbs will grow and bloom better.

The bulbs to be grown in water should be perfectly sound; indeed, the best bulbs should be selected for the purpose. Now put a bulb in the glass, and hold it up to see that the bottom of the bulb does not touch the water. If it does, some must be poured out. There must be an interval of about a quarter of an inch between the bottom of the bulb and the surface of the water. Next put the glass for a week in a cool room, where the sunshine will not reach it. The water

will evaporate, and a few drops must be added every day or two. In doing this, put the water in at the side of the bulb, without removing it.

When the roots are a couple of inches long, the glass should be removed to a window, where it will get plenty of light. The water should be changed about once a week. We have grown them, however, without changing the water at all; but the safest plan is to change it. This may be done without removing the bulb from the glass, by simply placing the fingers on the bulb and tilting the glass till the water all runs out. It is filled by pouring the water in at the side of the bulb. The roots are often very much broken by removing and replacing them. When the flowers are pretty well expanded, the glasses may be set on the mantle, the center table, or wherever desired.

When the bulbs have done blooming, they are usually thrown away, as they are seldom good for any thing afterwards. They may, however, be buried a few inches in the garden, and those that show any degree of plumpness when the foliage has decayed may the next fall be planted in the open ground, with a faint hope of getting a few weak blooms from them.

*In Moss.*—A better mode than the preceding is to grow the Hyacinth in moss, since the bulbs bloom better and ripen better. The moss should be dried, and then rubbed fine. Pots may be used, or baskets, the latter being most ornamental. Two, three, or more bulbs may be placed in the basket, according to its size. They should be covered

about an inch, and the moss pressed firmly about them. Set the baskets aside for a week or ten days in a cool room, and then bring them to the light. The baskets will look very pretty suspended near the window. They must be watered occasionally, as the moss gets dry. In watering, the baskets should be held over a pail till the water has drained off, or the drip will soil the carpet. In the spring the bulbs may be turned into the garden, where some of them will ripen tolerably; but it is not often that bulbs grown in water or moss are worth so much trouble.

*In Pots.*—This is by far the best mode of growing them in-doors. The soil should be light and rich. A good compost may be made of one half garden loam, one quarter muck, one-eighth sand, and one-eighth old manure. In the absence of these good soil from under a sod, with a little sand added to it, will answer the purpose very well. Pots four inches in diameter are the most suitable. Place a potsherd over the hole in the bottom, and then add an inch of broken charcoal for drainage. Fill the pot about two thirds with compost, press it down firmly without packing it, and then set in the bulb, with a little

sand directly under the bottom of it. The bulb must be set so that the top will be covered half an inch. Next fill up the pot, and press the soil around it. When all is done, the surface of the earth should be about half an inch below the rim of the pot, with the top of the bulb half an inch below the surface of the earth.

The pots may be left out of doors in a shady place till the weather gets quite cold, when they must be housed. A part of them may be retarded by putting them in a cool cellar, from which they can be taken as wanted; but in any event they must be brought to the light as soon as they begin to grow. They should be placed as near as possible to the light, and the pots turned occasionally to prevent the plants from being drawn on one side. The temperature of the room should not be too high. At first the pots should be watered moderately, but when the plants are in bloom water may be given freely, but not so as to sodden the soil. In the spring the bulbs, with the ball of earth, may be turned into the garden, where most of them will mature sufficiently to be planted out of doors the next year.

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## HORTICULTURE ON THE HUDSON RIVER.

BY W. A., OF POUGHKEEPSIE.

By some oversight, or strange combination of circumstances, the annual Horticultural Exhibitions of the Societies at Hudson, Poughkeepsie, and Newburgh, all occurred the last week in September. They even overlapped each other, a portion of their shows being held on the *same day*. This, for three neighboring cities, to say the least, was peculiarly unfortunate, for it prevented many from attending them all. It also shut out from each, beautiful specimens of each other's fruit and flowers.

The season has been singularly unpropitious, in this portion of the valley of the Hudson, for a successful horticultural show. An early frost destroyed all the peach blossoms.

Not a peach was on the tables at the exhibition in this city, or at Hudson. At Newburgh they were meager, both in number and size. Then, again, it has been an unproductive year for pears. Seldom has the crop been so small, or the fruit so inferior. Lastly, the out-door grape has proved a failure to a large extent. Some regular cultivators have half, some two-thirds of a crop. Some carefully cultivated trellises, within range of my observation, have almost totally failed to ripen. They will scarcely yield any really mature fruit this fall. Mildew has prevailed extensively, with a ruinous blight in every direction.

It is but truthful to remark, that the

Poughkeepsie Exhibition was nearly a failure. The show of fruits and flowers, and even vegetables, was small compared with previous years, and a few of the former were inferior in kind and quality. Some of the reasons have been given above. Still another reason is a serious one, and is as applicable to other societies as to our own in Poughkeepsie. *It is the want of interest among the members.* Nearly seventy names are on the records; while the actual contributors to the Horticultural show scarcely exceeded a dozen! Yet, many of the non-contributors were present, and invidiously remarked, *they* had better specimens on their own grounds. "They *regretted* they had not sent them for exhibition." Acting upon this suggestion, at a more recent meeting of the Society, a resolution was passed, requiring every member to add "something" to the semi-annual shows, in default of which, he must pay \$1 into the common treasury. As an instance of this neglect, a wealthy member of the club sent choice fruits and vegetables to the Horticultural Exhibition in New York, nearly eighty miles. He had *nothing* at the show in this city, which was held less than two miles from his residence! It is from such a cause mainly, that many local societies languish. It is often at the expense of small associations, that great horticultural shows flourish.

But there were some features of the exhibition here, which were worthy of all praise, and quite equal to any thing seen at the fine Newburgh show. No exhibitor had over thirty varieties of apples or pears; but most of them had unrivaled specimens of each. They were beautiful in size and complexion, and most of them of exquisite quality. The out-door grapes attracted more than usual attention, as this department of horticulture is extending in every direction, and among all classes of society. Mr. Uhl, a merchant of this city, has a lot in rear of his store, on Main Street, some 150 feet deep, and 19 feet wide. It is more or less inclosed by out-buildings, and may be called a warm, if not a shady inclosure. On the sides of this lot, he has grape trellises, and running through

its center is still another trellis, 130 feet long and nearly 20 feet in height. Some twelve feet from the ground, a scaffolding runs the whole distance, from whence he can trim and prune the upper portion of his vines at his leisure.

About six years since, Mr. Uhl planted his vines under the directions of a professional gardener, who pruned and trimmed them for two or three years. He was an entire novice in the beginning, but having taste and an observing eye, he then took charge of his own vines, and his success has been eminent. It shows what can be accomplished in a small inclosure, guided by judgment, and with the use of energy in the odd hours a diligent man can abstract from his daily business. Mr. Uhl's grapes excited great admiration at Newburgh. At the show in this city, he obtained a premium for the best and largest collection, and also, additional premiums for the finest Isabella, Diana, Clinton, Union Village, and Montgomery. Other gentlemen, Messrs. Young, Myers, Vincent, and Corlies, had beautiful specimens from their extensive and cultivated grounds, but Mr. Uhl, from the little inclosure in rear of his city store, excelled them all.

The grapes exhibited by Mr. Buckingham from under glass were exquisite bunches, while the trellises in pots, bearing fruit, attracted much attention. Mr. Girard, another amateur grape grower, presented the Society, free from competition for prizes, with 17 varieties of choice specimens from under glass, which won the highest compliments from the officers and other competent judges. The floral part of the exhibition was very beautiful, so fine a collection of green-house plants and other flowers not often having been seen in this city.

At a meeting of the Horticultural Club since the fair, although many of the members had extensively failed in their duty as exhibitors, and the show was not up to former years, it was wisely determined to *persevere*. The receipts met the expenditures, and the number of new members, with increasing influence and zeal, is large and encouraging. A question of interest was discussed at the



meeting, whether separate premiums should not be offered for pears from "dwarf," and from "standard" trees. Many amateurs have only the latter, while the former give larger and better fruit, to the great disadvantage of the "standard bearers." It was much regretted you did not extend your visit to Poughkeepsie as well as Newburgh. We shall not excuse you another year.

*List of Premiums.*

**FRUIT.**

Benj. H. Hart, best collection, \$2.  
 Second premium, E. Marshall, \$1.  
 Best ten varieties of winter apples, A. L. Allen, \$1.  
 Best seedling apples, C. R. C. Masten, \$1.  
 Largest and best collection, L. M. Vincent, \$3.  
 Second best and largest collection, Nathan Gifford, \$2.  
 Best five Duchesse d'Angoulême Pears, Luther Elting, 50c.  
 Best five Seckel Pears, Luther Elting, 50c.  
 Best five Napoleon Pears, Luther Elting, 50c.  
 Best five Beurré d'Anjou, Luther Elting, 50c.  
 Best five Flemish Beauty Pears, S. M. Buckingham, 50c.  
 Best five Louis Bonne de Jersey Pears, C. M. Pelton, 50c.  
 Best five Beurré Bosc Pears, C. M. Pelton, 50c.  
 Best five Lawrence Pears, C. M. Pelton, 50c.  
 Best five Urbaniste Pears, Jacob B. Jewett, 50c.  
 Best five Swan's Orange Pears, Jacob B. Jewett, 50c.  
 Best five Vicar of Winkfield Pears, Jacob B. Jewett, 50c.  
 Best five Beurré Diel Pears, Dr. Beadle, 50c.  
 Best five Beurré Clairgeau Pears, E. Marshall, 50c.  
 Best five Glout Morceau Pears, E. Marshall, 50c.  
 Best five Winter Nelis Pears, George Dewint, 50c.

Best five Buffum Pears, W. Atwill, 50c.  
 Best five Dix Pears, Josiah Williams, 50c.  
 Best three Watermelons, George M. Velie, very excellent article, \$1.  
 Second best, George Dewint, fine flavor and rich, particularly the Ice Cream Melon, 50c.  
 Best Muskmelon, T. L. Davies, pergardener, Mr. Pollard, a well-ripened, fine-flavored article, \$1.  
 Best Quinces, L. M. Vincent, beautiful and perfect specimens, \$1.  
 Second best Quinces, Luther Elting, very handsome specimens, 50c.  
 Lot exhibited by Mr. W. Atwill deserves attention as being healthy, golden color, and fruit fine quality.  
 Lot exhibited by M. Vassar, Jr., deserves notice, as some eight or ten were exhibited on a small branch, one foot in length.  
 Lot exhibited by James Brooks, Plums, one variety Lawrence Plums, very perfect article and fully ripened fruit. Being only one sample, not entitled to premium.  
 Mr. Abraham Wiltsie, after the opening of the Fair, showed some Quinces of extraordinary size. There was a cluster of eight very large ones, all growing on a branch one foot long.  
 The best and largest collection of Grapes, Stephen Uhl, \$2.  
 Second best, L. Elting, \$2.  
 Best Isabella, six clusters, S. Uhl, 50c.  
 Best Diana, six clusters, S. Uhl, 50c.  
 Best Concord, six clusters, H. L. Young, 50c.  
 Best Clinton, six clusters, S. Uhl, 50c.  
 Best Delaware, six clusters, C. M. Pelton, 50c.  
 Best Catawba, six clusters, J. Corlies, 50c.  
 Best Union Village, six clusters, S. Uhl, 50c.  
 Best Montgomery, six clusters, S. Uhl, 50c.  
 Best Rebecca, six clusters, H. L. Young, 50c.  
 S. Uhl, very fine Anna and Northern Muscadines.  
 L. M. Vincent, superior Delaware and Union Village.

Mr. Bentill, Concord and very fine Muscadine.

L. Elting, fine specimens of Anna, Rebecca, Catawba, and Concord.

H. L. Young, remarkably well-grown Diana, Delaware, and Rebecca.

J. Corlies, superior specimens of Catawba, Montgomery and Isabella.

A. Hasbrouck, good Montgomery.

C. M. Pelton, superior Clinton.

Mr. Ambrose Smith, of Modena, Ulster county, exhibited the Ontario grape, resembling in appearance the Union Village.

Mr. Caywood, of the same place, exhibited bunches of Trowbridge's large grape; fine specimens.

It might be remarked in regard to the Union Village grapes of Mr. Uhl, that he exhibited a branch producing in a space of less than one foot in length, three bunches of fruit weighing together 3 lbs. 2 oz. One bunch was nine inches long, not counting the stem, but from the top berry to the bottom of the cluster itself, and very compact.

Grapes under Glass, S. M. Buckingham, per Robert Gardiner, gardener.

#### WINES AND CIDER.

Best sample of Grape Wine, Jacob Corlies.

Best sample of other Domestic Wines, S. M. Buckingham.

Best sample of Cider Wine, M. Vassar, Jr.

One bottle of superior Currant Wine presented to the Association by Miss Forbus, made in 1825, being thirty-eight years old, excited considerable interest, and was found improved in flavor by the keeping.

#### VEGETABLES.

Best collection of Vegetables, to T. L. Davies, (J. Pollard, gardener,) \$3.

Second best, Theo. Gregory, \$1.

Best six heads of Celery, William A. Davies, (Horrocks, gardener,) 50c.

Best twelve Tomatoes, G. T. Rider, 50c.

Best three Purple Egg Plants, G. C. Burnap, 30c.

Best half peck Lima Beans, William A. Davies, (Horrocks, gardener,) 50c.

Best half bushel Table Potatoes, Edward Burgess, 50c.

Best three Hubbard Squashes, Dr. E. Beadle, 50c.

Best three Boston Marrow Squashes, M. A. Notbeck, 50c.

Best peck Sweet Potatoes, A. Wilcox, 50c.

Best six Table Beets, J. B. Jewett, 25c.

Best six Carrots, S. M. Buckingham, (Robert Gardiner, gardener,) 25c.

Best six Parsnips, S. M. Buckingham, (Robert Gardiner, gardener,) 25c.

Best six Flat Turnips, Wm. A. Davies, 25c.

Best half peck Onions, Dr. E. L. Beadle, 25c.

The greatest variety of Squashes, not including the first two classes, S. M. Buckingham, \$1.

#### DISCRETIONARY PREMIUMS.

For a fine specimen of Chicory Plant, to H. D. Myers.

For superior collection of Winter Squashes, Rev. E. N. Chandler, John M. Beutell, and Benj. Hart.

For two new varieties of Squash, named respectively Japan and Smyrna, David H. Barnes.

#### GREEN HOUSE PLANTS AND FLOWERS.

Best collection of Green House Plants, Joseph Pollard, gardener for Mr. Thomas L. Davies, \$4.

Lot No. 34, very noticeable for its choice collection of strictly Foliage Plants, \$4.

Best Floral Design, Mrs. Edward Marshall, \$3.

For the second best, to Miss Susan Myers, \$3.

Best collection of Cut Flowers, J. Pollard, gardener of Mr. Thomas L. Davies, \$2.

Second best, to David Hunter, gardener of Mr. Stuyvesant, \$2.

Best collection of Dahlias, to Mr. Edward Marshall, \$1.

Second best collection, to Mr. Samuel Curry, 50c.

Best collection of Roses, to the gardener of Mr. T. D. Davies, \$1.

Second best, to D. Hunter, gardener of Mr. Stuyvesant, 50c.

Best collection of Fuchsias, to the gardener of Mr. Stuyvesant, \$1.

Best collection of Verbenas, Mr. Edward Marshall, 50c.

A very prettily composed Bridal Bouquet and Wreath, exhibited by Mr. Edward Marshall, certainly merits an appreciative notice, as a graceful attempt to exhibit flowers in such a manner as to suggest their gentler uses and associations. Might not more be accomplished in this direction?

Among the beautiful Bouquets that graced the fruit tables should be noticed one arranged by Miss Martha Buckingham, and another by George Hindinlang, florist at Mr. Marshall's nursery.

Mrs. E. L. Beadle furnished during the continuance of the exhibition a fine collection of Roses and Dahlias, also a beautiful Bouquet, for which the club feel much indebted.

# MISCELLANEOUS ARTICLES.

Mr. Sedgwick's Garden Tools, in great variety, and all manufactured in our city, were objects of much attention.

The Honey exhibited by Carpenter and Miller, too late for a premium, was very white and beautiful.

[We did purpose visiting Poughkeepie, and should have done so, if, as you express it, the exhibitions had not "overlapped" each other. We are much indebted to you for this account of your exhibition, to which we have appended the list of prizes awarded. We hope the members of the Society, as well as the citizens of Poughkeepsie, will profit by your criticisms. It is not in the least complimentary to them that they have not spirit and pride enough to give a generous support to the Horticultural Club. It was very different at Newburgh. Mr. Uhl's grapes at Newburgh were remarkably fine. The Club must strive on till it makes its mark.—Ed.]

## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

BULBS.—Messrs. Thorburn, of New York, will please accept our thanks for a package of very choice Hyacinths, &c. The bulbs are sound, and as fine as can be.

DEATH OF DR. MASSIE.—We have received the painful intelligence that our correspondent, Dr. Massie, died suddenly of congestive chills at Toronto, while on a pleasure party with his family. Under the assumed name of "El Medico," he wrote many articles for the HORTICULTURIST, which will be long remembered for their usefulness and polished style. He was an enthusiastic amateur, and devoted a large portion of his leis-

ure moments to the cultivation of the vine. He will be sadly missed from the circle of our correspondents, for his articles were highly prized. We expect a friend to furnish a sketch of his life, and therefore only allude to his death briefly. We can not help feeling that we have lost one of our best friends. He, however, has only "gone up higher."

THE PENN PEAR.—We are indebted to Rev. Mr. Buel for specimens of this pear. It is very juicy, sweet, and tender, and we are much pleased with it. It is figured and described by Mr. Downing in a former number.

PLANT SHOW AT MR. BRIDGEMAN'S.—Mr.

Bridgeman recently had a free exhibition of plants at his green-houses in New York, which proved to be very interesting and successful. Ornamental-leaved plants figured largely. There were fine specimens of Pandanus, Caladiums, Begonias, Marantas, etc., besides a large collection of Ferns, Gladioli, Hanging Baskets, and many other interesting objects. The number of visitors was large, and we have no doubt the exhibition *paid*, as the saying is.

**GREEN'S INDIA-RUBBER COATED PAPER.**—Mr. Fuller has left on our table samples of this paper, with which we are much pleased. The inventor probably had no such idea in his mind, but it is nevertheless well adapted for wrapping up plants, cuttings, &c. It is very much like oiled muslin, and is a cheap substitute for it, a sheet 24 by 36 inches costing only 15 cents. It is water proof, and sufficiently stout for horticultural purposes. We consider it a very useful article.

**CASTOR OIL POMACE FOR MOLES.**—The mole, in many places, is a pest that is unendurable. Some certain and easy means of getting rid of him will be regarded as an inestimable boon. This may be done, an amateur friend assures us, by the use of castor oil pomace. We have not tried it sufficiently to give it a thorough test, but we have the most implicit confidence in the assurance of our friend, who says that he has used it for many years with uniform success, driving the moles entirely from his place. The run of the mole is to be opened, and some of the pomace placed in it. The pomace has a very offensive smell, and is supposed to act by diffusing its strong odor through the run. It should not be placed too near plants, as it is very acrid, and will destroy them. Castor oil pomace is also a very good fertilizer, being rich in ammonia, and may be used with advantage as a top dressing composted with muck. It may be had of Mr. Lane, at 41 Park Row, in either large or small quantities.

**FAIR OF THE AMERICAN INSTITUTE.**—The late Fair of the American Institute was held at the Academy of Music, a building, we

are compelled to say, every way unfitted for the purpose. Almost every city of any pretension has one building at least somewhat suitable for public exhibitions; New York has nothing of the kind. The Institute has been talking for several years of erecting a building adapted to this purpose, and we know of no better investment of its funds. We would suggest to the Board of Trustees that now is the time to do it.

The Horticultural department is the only one that has any special interest for our readers. The other departments were as well represented as usual; but the absence of motive power for driving the machinery detracted much from the interest. The display of Apples and Pears was large and fine, and the specimens much better than we expected to find them. The best new Pear that we saw was the Wilmington. It will rank among the best, being melting, juicy, sweet, and aromatic. It was shown only by Mr. Downing. One of the most interesting lots was a large collection of Apples and Pears from Mr. André Leroy, of Angers, France. The specimens were large and handsome, and mostly in fine condition. We believe this is only the second time that a European has exhibited at our fairs. We had no opportunity of testing the quality of them, which we the more regretted, since not a few were new kinds. Specimens of these have since passed into the hands of Mr. Downing, at our suggestion, and they will therefore be heard from. We may say, however, that our own fruit does not suffer by comparison, so far as appearance is concerned. Mr. Leroy deserves special praise for his enterprise. We hope this will not be the last time in which he is represented.

The display of grapes, both native and foreign, was rather meager, and not as good as they should have been. The Delawares were ripe, and very fine; but there were few of them. The Concord, Hartford, Adirondac, and some Isabellas grown in a yard, were also ripe. The bunches of Adirondac were much the best that we have seen of this grape. It is a sweet and very good grape, but not vinous. A day or two after the

prizes were awarded Mr. McMillen brought in some hot-house grapes that were really fine, and much the best exhibited. Of Peaches and Plums there were very few. It is rather surprising that there should have been only a few dishes of rather indifferent peaches at a time when our market was pretty well supplied with them.

The Cut Flowers, Dahlias, Hanging Baskets, etc., were numerous and good. Mr. Burgess deserves special mention for the frequent renewal of his flowers, thus keeping his stands fresh and neat. Ornamental-leaved plants constituted a very interesting feature. These, together with some fine Orchids, were principally contributed by Mr. Buchanan, of Astoria, and Mr. Baker, of New York, the latter an enthusiastic amateur of orchideous plants, his collection being large and finely grown. In a better room the flowers would have made a much finer appearance.

The display of vegetables was not very large, but the samples were mostly good.

The prizes awarded in the Horticultural department were printed in our last issue.

Mr. Carpenter presided over this department in a manner that does him much credit. The arrangement of the articles was as good as could be made under the circumstances, and the labors of the judges were in consequence very much lightened. We may add, that Mr. Carpenter had on exhibition a large and very fine collection of fruit, not entered for competition.

THE NEW YORK GRAPE SHOW.—This exhibition opened at the *Agriculturist* office on the 1st of October, and continued three days. The occasion was a very interesting one, being the first exclusively grape exhibition ever held in the city, and brought together a large number of persons devoted more or less to grape culture. Being free to the public, they availed themselves of the opportunity in large numbers. The samples shown were numerous, and embraced all the well-known varieties of grapes, besides some that have not yet been offered to the public. Among the varieties shown were the Dela-

ware, Allen's Hybrid, Diana, Anna, Catawba, Isabella, Concord, Hartford Prolific, Tokalon, Creveling, Adirondac, Maxatawny, Loomis' Honey, and others, besides a number of seedlings, among which was the Iona, which deservedly took the first prize. The names of the principal exhibitors will be found in the prize list, except that of Mr. Knox, who came in too late for competition. He made a large and very good display.

An exhibition of this kind affords an excellent opportunity for comparisons, and we observed that many employed themselves in this way, and we have no doubt profitably. A meeting for conversational purposes would have added much to the interest of the occasion, and should not be overlooked if these exhibitions are continued. It is so rare to get a large body of grape growers together, that the occasion should not be allowed to pass by unimproved.

The extent and character of the exhibition were quite satisfactory to Mr. Judd. It might, no doubt, have been larger if earlier notice had been given. There were some parties about New York who might have exhibited, but did not. The excuse made in one instance at least was, that the party could cut three good bunches, but not five. An excuse like that should never be made in the presence of a grape grower, for he will be very apt to think there is something behind it. A man who has a vine from which he can not cut five good bunches should do one of two things: either dig it up and throw it away, or change his mode of culture. We do not admit an excuse like that to be valid.

Among the prizes offered was one for the best flavored grape. This was awarded to the Adirondac. The decisions of judges, as a general thing, we pass by without criticism; but this one is so extraordinary that it challenges at least a few remarks. It must be borne in mind that the prize was for *flavor* alone, without regard to earliness, size, or any thing else but this; yet with the Delaware, Diana, Anna, and Allen's Hybrid before them, the judges gave the prize to the Adirondac. We do not wish to de-

tract in the least from the character of the Adirondac, which is really a good grape; but in *flavor* it certainly will not compare with any of those we have named, and especially will it not compare with the Delaware. It is almost as if one should compare the Muscat of Alexandria with the Sweetwater, or the Seckel with the French Jargonelle. It is said that tastes differ, and we allude to the subject to let our readers know how widely our taste differs from that of those who consider the flavor of the Adirondac superior to that of the Delaware. Mr. Downing was chairman of this committee; but we are authorized to say that he dissents from this decision in the most emphatic manner. With his discriminating taste and large experience among native grapes, we should have been surprised if it had been otherwise.

Appended is the list of prizes:

Best native seedling, which has never before taken a prize, \$10; to Dr. C. W. Grant, for "Iona."

Best collection of native grapes, \$10; to A. S. Fuller, of Brooklyn.

Second best collection of native grapes, \$5; to M. Olm, Flushing, gardener to Orange Judd, 41 Park Row, N. Y.

Best six varieties of native grapes, \$4; to F. F. Merceron, Catawissa, Pa.

Second best six varieties of native grapes, \$2; to George W. Martin, Brooklyn, E. D., N. Y.

Best four varieties of native grapes, \$3; to W. Brocksbank, Hudson, N. Y.

Second best four varieties of native grapes, \$2; to Frederic Baumeister, East Newark, N. J.

Best five bunches of native grapes of any kind, quality to rule, \$2; to J. W. Bailey, Plattsburg, N. Y., for "Adirondac."

Best five bunches of Delaware, \$2; to E. O. Eaton, Troy, N. Y.

Best five bunches of Diana, \$2; to F. C. Brehm, Waterloo, N. Y.

Best five bunches of Catawba, \$2; to W. B. Wescott, N. Y., (grown in city yard.)

Best five bunches of Concord, \$2; to H. S. Young, Poughkeepsie, N. Y.

Best five bunches of Hartford Prolific, \$2; to W. Taft, Fordham, N. Y.

Best five bunches of Herbemont, \$2; to C. F. Erhardt, Ravenswood, L. I.

Best five bunches of Allen's Hybrid, \$2; to John Hoag, Newburgh, N. Y.

Discretionary prize of \$1, George W. Martin, Brooklyn, N. Y., for Brinkley, grown out of doors.

Discretionary prize of \$1, to Peter Raabe, Philadelphia, Pa., for Loomis' Honey, for flavor.

Discretionary prize of \$3, to N. Armstrong, Bergen, N. J., for collection of hot-house grapes.

#### CATALOGUES, &C.

*C. W. Grant*, Iona, near Peekskill, N. Y.—Illustrated Catalogue of Vines.

*John Best*, Utica, N. Y.—Wholesale Catalogue of Grapes, Currants, &c.

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## CORRESPONDENCE.

EDITOR HORTICULTURIST,—Before your Hints on Grape Culture appeared, I had planted a row of vines four feet apart, intended for a different training. Pleased with the simplicity of your plan, and the clear and explicit instructions given for carrying it out, I adopted it for a portion of the vines. I think, however, that the arms, in my case, are too short to furnish bearing-wood for the capability of the vines.

Will it answer to convert the safety-valves into a second pair of arms, say two and a half feet above the others, duly providing them with safety-valves?

Or the following plan: to stop the safety-valves and all the bearing shoots at the proper point for fruiting, except those on the ends of the arms, which are to be grown for the extension of the arms, hereafter to be trained in, towards the center, two and

a half feet above? A word of advice through the *HORTICULTURIST* will be thankfully received.

Although the subject of grafting the vine is pretty much exhausted, I believe I can give some information that will be new to at least a portion of your readers. I grafted the vine November last, about the middle of our Indian summer. Also on the 13th of January, the 19th of February, and the 2d day of March. The grafts all took, and made good growths.

To throw some light on a mooted question, whether any advantage is gained by very early grafting, the stocks grafted in November and February, both very strong and vigorous, and supposed to be about equal in root-power, were selected for the purpose. The former, a Catawba, was branched under ground, in consequence of raising the border. In each branch was inserted a Delaware graft. They pushed no earlier than some others subsequently grafted. After a few leaves were made, one of the shoots was accidentally knocked off. Soon after, several others started from the old wood, all of which were broken off excepting the strongest, which I intended to remove as soon as any check should be discovered in the growth of the Delaware. On further consideration, I concluded it would be a fair test of the question to let it grow. The Delaware kept the advantage till about the first of August, when the Catawba took the lead. They were both stopped on the first of this month, the Delaware having made over thirteen feet of wood and callipered seven-sixteenths of an inch at the first internode. The Catawba fourteen feet, and measured at the same point a half inch in diameter.

The latter, a Herbemont, into which was grafted a Lincoln, two buds pushed from the same joint, and made respectively eighteen and twenty feet of wood; the larger measuring nine-sixteenths and the smaller a half inch in diameter at the first internode. In all cases the laterals were regularly pinched in.

From the many experiments, the many successes and failures I have made within

the past five years, I am now confident that in southern Ohio the vine can be successfully grafted under ground, when clear of frost, from the middle of November to the middle of July, excepting a short period during the first flowing of the sap in the spring; but with much greater certainty if done while the stock is dormant. That if the graft is neatly fitted and accurately adjusted in the stock, which the vine requires, success is just as sure as on the apple or pear.

To avoid failures in winter-grafting, particularly on small stocks, the grafts should be tied in with narrow strips, cut from thin sheet gum elastic, which retain their strength and elasticity for many months under ground, and readily yield to the expansion of the stocks.

In stocks intended for winter grafting, if headed down late in the fall and well-covered with earth till worked, the grafts take more kindly and push earlier, than when headed down at the time of grafting.

Yours truly, J.

*Chillicothe, O., Sept. 28, 1863.*

[Of the two plans suggested, the first is the best; but we do not quite like either. The objection to the first is, that in the course of a few years the lower course of arms will become almost barren. If you think your vines can carry more fruit than is now provided for, you can follow a plan that we practice occasionally. It is very simple, and not open to the objections which lie against the plans you propose. We shall illustrate it in our "Hints" before long, but will now endeavor to make you understand it by mere words. The safety valves are carried up on the back of the trellis. Instead of cutting the safety valves at the base, prune them about two feet long. They are then to be bent down short at nearly a right angle with the line of the trellis, stakes driven into the ground, and the ends of the safety valves tied to them. If they were bent at precisely a right angle, they would touch each other, which they should not. The canes, when rightly placed, will be in

the form of a V. The two shoots that proceed from nearest the base must be grown as safety valves; the other shoots may be fruited, but their ends must be pinched out as soon as the clusters come into flower. The laterals must also be pinched in to one leaf; in short, these shoots must be severely pinched in till the safety valves are strongly established. The same course may be repeated year after year, or as long as your vines will bear it. You will get a better idea of the operation when we come to illustrate it.—Your remarks on grape grafting are very interesting. We think it is pretty well established that early grafting is most successful. The majority of failures occur where the graft is put in just before or during the flow of the sap.—Your postscript, announcing the death of El Medico, sent a pang of sadness to our heart; for we had learned to love him without ever having seen him. Horticulture, in him, has lost one of its most devoted and intelligent followers. —ED.]

EDITOR HORTICULTURIST,—My attention was first called to the Delaware grape by an article in your excellent magazine, the HORTICULTURIST, some two years ago last spring, at which time I moved on a small place in the country, a short distance from Troy.

The same spring I purchased from a western house a few Delaware vines, (a larger portion of which, by-the-way, turned out to be any thing but Delawares,) and the following fall I received a few vines from Dr. Grant, (that were simon pure,) and send you, accompanying this, a few bunches I to-day cut from one of the vines had of the Dr. Can any one at the exhibition, (grape,) now being held at 41 Park Row, (which I designed, but am prevented attending,) show better and finer bunches of Delawares from so young vines, having but ordinary care and culture, and grown, too, in a very exposed situation?

I have grown a number of other varieties, set at the same time; and notwithstanding all that has been said and written about the Delaware being a poor and feeble grower,

etc., I have not on my place a vine of any kind that has done better, or as well in every particular as the Delaware; and when the quality of the fruit is brought in question, words are not to be found in my vocabulary to express the excellence of the Delaware over all other kinds grown out of doors; and I sometimes think I prefer them to the foreign kinds I have growing under glass. But not to be tiresome, have I not succeeded well with my Delawares? Are they not good?

I have some 600 feet of grape trellis, and some dozen varieties of grapes growing. I now wish I had but one variety, and that the Delaware. Dr. Grant and yourself have not said half enough in its praise.

Very respectfully yours, E. O. EATON.

Troy, N. Y., Sept. 30, 1863.

[We can best answer your question about the grape exhibition by congratulating you that you took the *first prize* for Delaware grapes. That is pretty good evidence that nobody did show better, though there were many on the table that were very fine. You have indeed succeeded well with your Delawares. It is a great satisfaction to us to know that we were instrumental in first calling your attention to it. From the many thousands who have planted it on our recommendation, we have not yet heard the first word of regret. Your letter will be an encouragement for others to plant this most delicious grape.—ED.]

EDITOR HORTICULTURIST,—I herewith send you what is considered a new grape in this place. You will please give name, etc., if known, in next number of HORTICULTURIST. The specimen I send you is not a fair one. The grapes were nearly all taken from the vine before I saw it. It is entirely different from any other variety known here.

Respectfully yours, L. K. BASOVE.  
Farmersville, O.

[The grapes came duly to hand. We are sorry to cause you any disappointment, but they are the *Vitis labrusca*, and have no value at all for cultivation.—ED.]



THE  
HORTICULTURIST.

VOL. XVIII.....DECEMBER, 1863.....NO. CCX.

Hints on Grape Culture.—XXXII.

WE have stated that the system of training last described, besides being simple, is the least expensive of any that can be relied on for good results, though less valuable than the double-arm system. A wire trellis, never cheap, has now, in common with every thing else, got to be an expensive affair. A wire trellis has other objections besides its first cost, but there can be no doubt that, in the end, it is the cheapest that can be put up. All, however, can not afford the outlay involved in a wire trellis; but stout stakes can always be purchased for a moderate sum; hence the value, to some, of our last mode of training. But this mode of training is not free from faults, the principal of which consists in the unequal flow of the sap in the two arms, occasioned by the removal of one cane while the other is left nearly entire. We now propose to show how this fault may be corrected, without adding materially to the cost of the vineyard. The increased cost, however, is soon paid by the additional quantity of fruit.

The remedy proposed consists in simply lengthening the arms, and placing two canes on each, as shown in *Fig. 1*. The canes are about one foot apart, the illustration being on

a scale of one inch to the foot. In laying in the arms, they may at once be made long enough to grow two canes to each. It will be seen, on examining the figure, that the arms are of equal length, with two canes on each, and the vine is thus well balanced in all its parts, and will consequently perform its work in a satisfactory manner. Four posts may be used, one for each cane; or a post may be placed at the ends of the arms, and slats or small poles nailed on at intervals of about eighteen inches. It will thus be seen that the expense for supports is not greatly increased, while much is added to the increase of fruit.

The pruning consists in cutting off the canes *e* and *g* at the point *i*. The bearing canes, *d* and *f*, are to be shortened to four feet. If left six feet, as in the system last described, the vine would be overtasked, and the results unsatisfactory. It may be necessary, in some cases, at least during the first bearing year, to reduce these canes to three, or even two feet. This must be determined by the condition of the vine. The reader can not be cautioned too often against letting his vines overbear.

As soon as the fruit has set, the ends of

the shoots on the bearing canes must be pinched out. The laterals must also be kept well pinched in, allowing only one leaf to be

like the laterals. This will not only increase the size of the fruit, but also the canes that are to fruit next year.

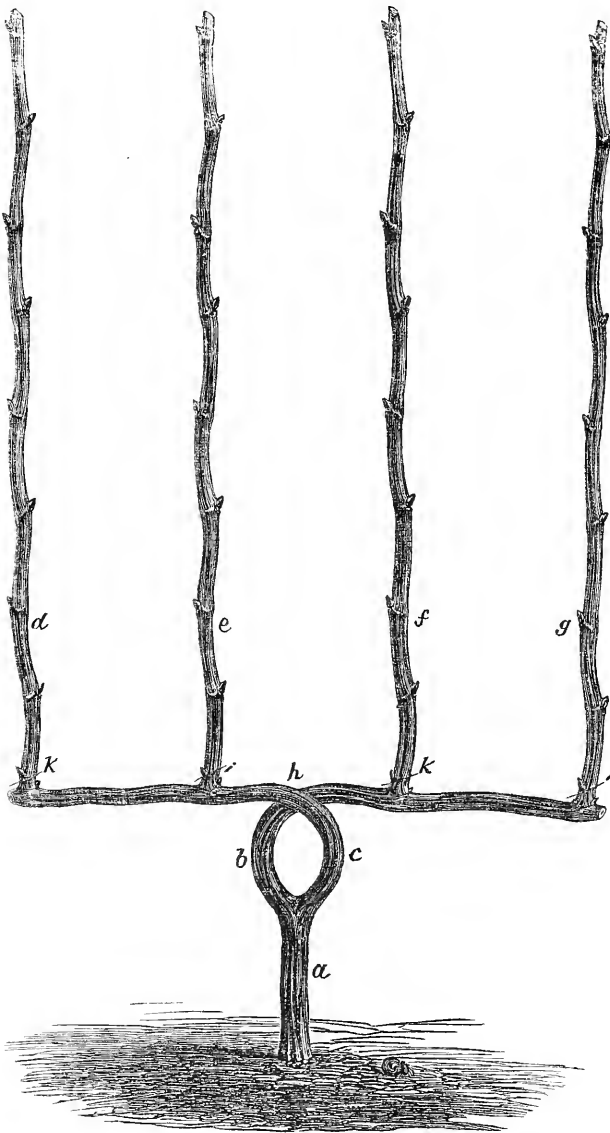


Fig. 1.

formed before the operation of pinching in is repeated. If the bud at the end of the bearing shoot breaks, it must be pinched in just

The canes proceeding from *i* and *i* should have their laterals pinched in, as usual. When the canes are about six feet high, their

ends must be pinched out, and the operation repeated two or three times during the season. It is only the extreme end that is to be pinched out.

canes, the treatment of which will now be understood. The canes *d* and *f* are to be cut off at the points *k, k*. One cane is to be taken from each of these, and treated as the

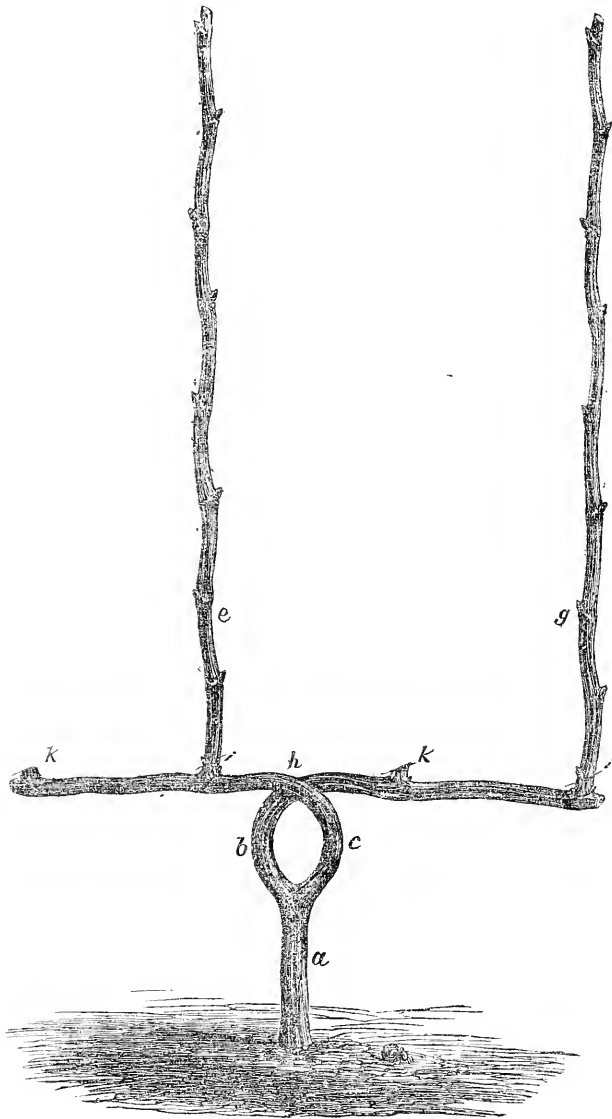


Fig. 2.

The pruning the following year will be as follows : the canes that proceeded from *i* and *i* are to be shortened to four feet, for fruiting

canes *e* and *g* were this year. The treatment will continue the same year after year, the alternate canes being fruited, one on each

arm. *Fig. 2* shows the vine pruned as just described.

If it should be desired at any time to convert this system into the double-arm system, it is easily done by allowing the two outside canes to grow during one season, and laying them down the next for the extension

of the arms, and then pruning as described for the double-arm system. By bending the arms down sharp early in spring, dormant buds near *h* may be started for "safety valves." It will thus be seen that this system may be changed without the loss of fruit for a single season.

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## PLANT HOUSES.—VII.

BY THE EDITOR.

WE are a little profuse this month in our illustrations of Plant Houses, as a Christmas greeting to our readers. The first is somewhat after the manner of the "gem," and is devoted to propagating, forcing, and growing grapes. It was built for C. Marié, Esq., of Tubby Hook, N. Y. *Fig. 1* is a side elevation. *Fig. 2* is the south front. By putting these two together, the reader will get a general idea of its appearance. *Fig. 3* is a section, showing the arrangement of the tanks, etc. *Fig. 4* is the ground plan.

The house is twenty by forty-three feet. The walls are of plank, nailed to locust posts, the space between the outside and inside boarding being filled with tan. The roof is a curved, continuous fixed roof, with one ventilator in it, additional top ventilation being afforded by movable sashes over the doors.

In *Fig. 4* the space A, bounded by the dotted line, is devoted to grapes. The border is inside, and occupies the whole floor of the house. It is about three feet deep. At the dotted line a wall is built across the house, the space A being nearly two feet higher than B; but there is no partition. The space B is devoted mainly to propagation and forcing, though a large bed in the middle has been used, during the past summer, for growing vines in pots. C is the boiler pit; this, however, was inclosed in glass by extending the roof of the house after the plans were made.

The interior arrangement will be better understood by referring to *Fig. 3*. *a* denotes the floor of the space B in *Fig. 4*; and *b* the floor of the space A. *c, c,* are six-inch pipes

which bring in fresh air from the outside. There are several of these pipes on each side, and they answer the purpose admirably. *d, d,* are beds for propagating, forcing vegetables, etc. These beds rest immediately on the tank, and the degree of bottom heat is regulated by a peculiar arrangement of the bottom of the bed. In the middle of the space B is a large earth bed, which may be used for growing plants of various kinds. During the past season it has been used, as already stated, for growing vines in pots, for which it is well adapted, as it is also for growing fruit trees in pots. The propagating bed is on the west side of the house, where it will need a little shading, which has been duly provided for. The bed on the east side will be used for growing Strawberries, Lettuce, Cucumbers, Tomatoes, etc., during the winter. The tanks are heated by a small conical boiler.

The space A was planted with vines last spring. They have made a large growth, and ripened their wood finely. The arrangement of the house will seem odd enough to old-fashioned plant growers; but we predict, nevertheless, some very gratifying results. We shall keep our eye on it, to see that nothing goes wrong, and expect it to take its place among the "gems."

Our second illustration is a house with a low, straight roof. *Fig. 5* is a perspective view. Unlike some other houses, this one was built with a due regard to cost, for which reason, among others, side lights were omitted. The sides are of inch-and-a-half plank, nailed to locust posts, the interval being filled with charcoal dust. The roof is a con-

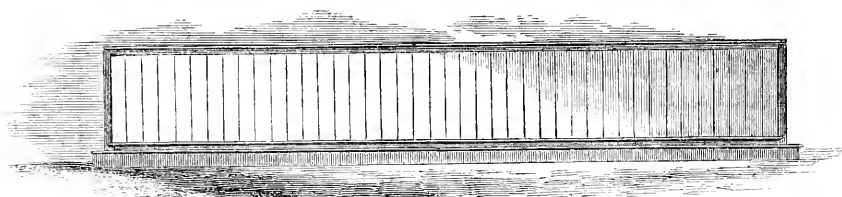


Fig. 1.—Side Elevation.

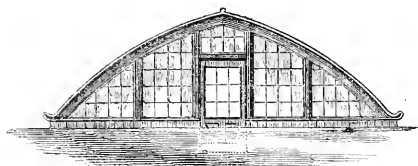


Fig. 2.—South Front.

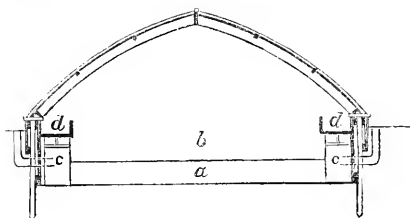


Fig. 3.—Section.

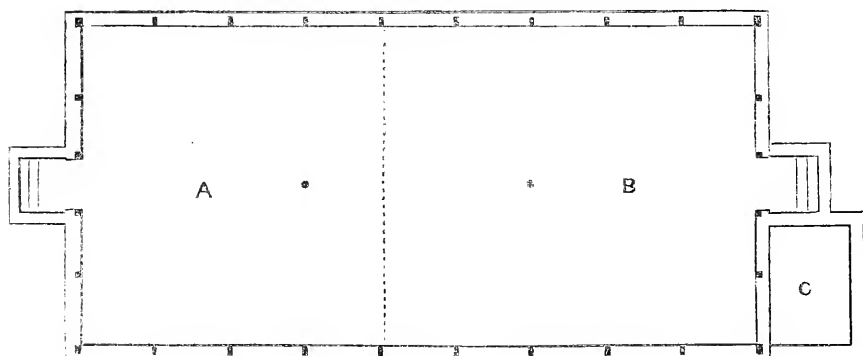


Fig. 4.—Ground Plan.

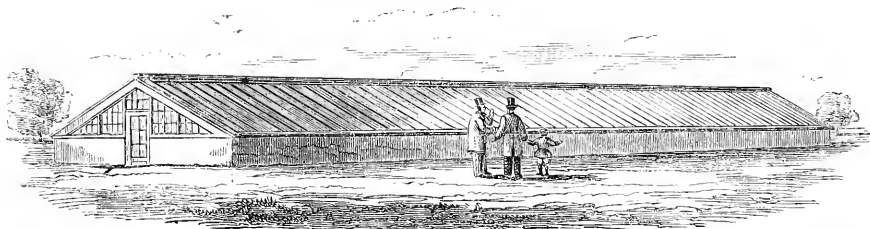


Fig. 5.—Perspective View.

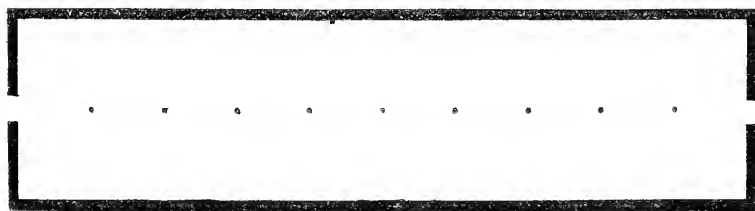
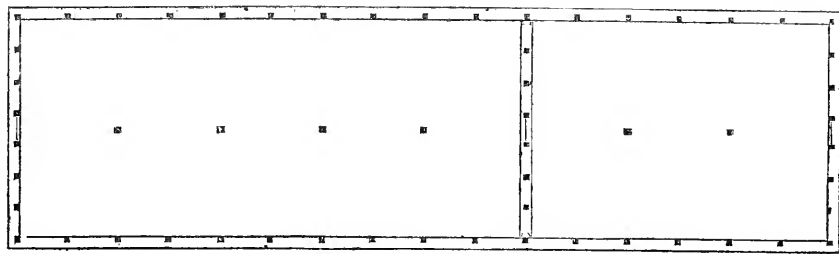


Fig. 6.—Ground Plan.

tinuous glass roof, and has three narrow ventilators on each side immediately along the ridge. The sashes over the doors are also used as ventilators.

*Fig. 6* is the ground plan. The house, it will be seen, is narrow, being only twelve feet wide. It has a flat table on each side, with a walk in the middle, through which, however, there is a series of light posts, placed there for training climbers to, and not for the support of the roof. The house is heated by two four-inch pipes, placed under the tables about six inches from the ground. The boiler pit is in a sunken shed outside the house, and is not shown in the plan.

protection from northerly winds all that could be desired. The foundation is a hollow brick wall, extending one foot above the ground. The side sashes are three feet high, every other one being hung to open inwardly for purposes of ventilation. The sashes over the doors are also hung as ventilators, and these are principally used. The roof is curved, and is on the fixed principle. The perspective view makes the roof appear steeper than it is. The view of the south front (*Fig. 8*) gives the true curve of the roof. The house is well proportioned, and presents a handsome appearance from the street. *Fig. 10* is the ground plan.



*Fig. 10.*

We made the design some six years ago, for P. Baldwin, Esq., an amateur friend. It has been used for growing such plants as are usually found in an amateur's collection, and has given a large degree of satisfaction, which is our principal reason for reproducing it here. Though a cheap style of house, it is neat, and built in a most substantial manner. It promises to last for many years.

Our next illustration is a house quite different in its style and character. It was designed for T. Romeyn, Esq., of Kingston, N. Y. It is divided into two compartments by a glass partition, one being used for plants, and the other for grape vines and propagating purposes. It is twenty feet wide and seventy feet long. The grape vine border is entirely inside the house.

*Fig. 7* is a perspective view. The house is located on a large village lot, not far from the dwelling, and is in full view from the street. The exposure is excellent, and the

*Fig. 9* is a section, which to some eyes will present a peculiar appearance. The whole house is heated on the tank system. The boiler pit is outside, beneath the surface, and over it is built a handsome summer house. The pit is sufficiently large to hold coal for the winter. There are three independent tanks, and the pipes from the boiler to the tanks are so arranged with cut-offs, that either or all of them can be heated. Two of these tanks are seen in *Fig. 9*, one on the sides, and one in the middle, the latter being divided. The other tank (not shown) is in the plant house. The tank on the sides of the house, which runs all around it, is used for heating the grapery. The divided tank in the middle is covered with a bed, and is used for propagating purposes. The top of the bed is covered with sashes. *Fig. 11* will give some idea of the arrangement of the pipes and tanks.

This is in all respects a fine house.

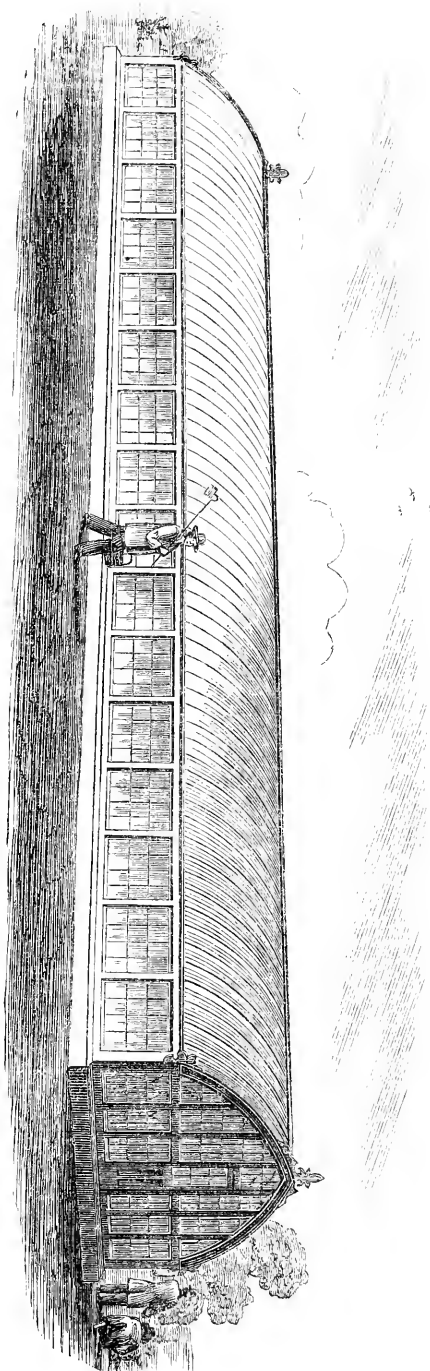


Fig. 7.—Perspective.

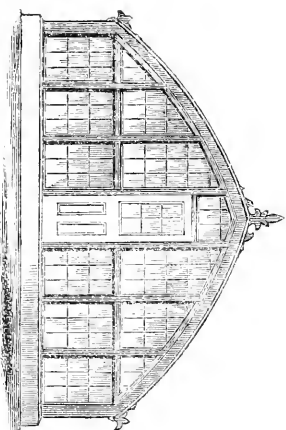


Fig. 8.—South Front.



Fig. 11.

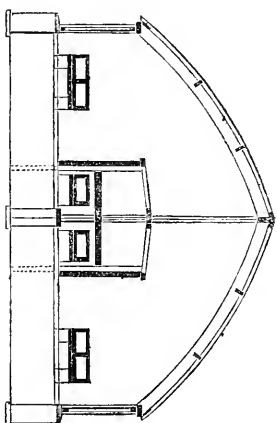


Fig. 9.—Section.

## THE QUALITY OF GRAPES.

BY R. G. PARDEE.

OUR tastes are in some good measure the result of education. When first called upon to judge of a new fruit, we are liable to err, by reason of our imperfect stand-point of comparison or prejudice. Some persons' tastes never become reliable. It requires at all times a very nice discrimination, and no small amount of judgment and experience.

In the question of the comparative merits of our delicious native grapes, time and experience are working out the most important results. During the last three years the writer has taken especial pains, not only to cultivate his own taste, but also to test the numerous varieties under multiform culture, climate, and soil. The past season having afforded superior opportunities to complete the test, the results are herewith given.

First stands the refreshing Delaware grape. It seems to be decidedly superior to all others in agreeable richness and flavor, melting pulp, and acceptableness for the table, or for wine.

Having called to my aid more than a score of ladies and gentlemen of cultivated taste, their unbiased opinion, expressed in every case during a period of three weeks, was, that the Delaware stands decidedly ahead of all others. Of many specimens of the Delaware grown in various localities, clearly the best and richest flavored ones came from Dr. Grant's oldest vines at Iona.

Second.—Next we must place the new grape "Iona," in so far as one season will permit us to do so. It is decidedly superior to the Diana or Catawba grapes, in point of flavor or agreeableness. By some it may be preferred to the Delaware, as it is more sprightly, although our taste prefers the latter. It seems to combine more than the good qualities of the Diana and the Catawba, but it does the more nearly resemble the latter.

Third.—The Diana comes next. It has

been very superior this year, and sustains its well-known reputation.

Fourth.—I must place the new seedling "Israella" next in quality and superior in earliness. It is the best, the most sugary and tender fleshed black grape I have yet tasted. Ripening as it does about three weeks before the Isabella, and being so much superior in flavor to the Hartford Prolific, or even the Concord or Isabella, it must come into universal demand, if it sustains in subsequent years the promise of this.

Fifth.—The Concord has done well this year. It does not overbear, and the quality of its fruit this year equaled its best promise of former years. It is quite a favorite with many, although in point of flavor it will not bear criticism.

The Rebecca, the Anna, and Allen's Hybrid have furnished some most delicious white grapes, and well sustained their former reputation, and some other varieties I might name worthy of attention, but after particularizing the above, I am quite content to make my list a very short one. Methinks an abundance of those which I have enumerated would soon lead us to regard most other kinds with indifference. I am glad to observe that Dr. Grant is propagating No. 1, 2, and 4 in liberal quantities, with improved culture and extraordinary success.

[We are obliged to you for your notes on the "Quality of Grapes." Seeing grapes as you do, under a variety of circumstances, you should more frequently give the results to the public. We think you have given the true relative position to the Iona and Delaware. Some, as you say, will no doubt prefer the Iona, as it is almost as good as the Delaware, and its size will determine the preference with some. The Delaware and Iona are the most valuable grapes we have at present.—Ep.]



## NOTES ON GRAPES.

BY E. FRYER, GARDENER TO HON. WM. H. STARR, NEW LONDON, CT.

THIS is not a favorable locality for the grape, the rose bugs accumulating in such multitudes at the time the vines are in flower, they eat up and destroy it before the fruit is set. This season they seem to have decreased in numbers considerably, so we have had a better crop of hardy grapes.

*Concord* has done well, giving a good bunch and berry; both wood and fruit free from mildew.

*Diana* has made a great growth of well-ripened wood; fruit fair, and free from mildew. A good grape for this locality.

*Perkins* produced irregular bunches, but large berries, quite sweet; nearly, if not quite equal to *Diana*. The writer would like to hear from any one of the correspondents of the *HORTICULTURIST* who may have this variety under cultivation, as to its merits or demerits, as the case may be.

*Rebecca* made very poor growth; much mildewed, and the wood unripened.

*Dartmouth*. This is a "big thing" in the way of a grape, but very foxy; I would

say all fox and acid; grows strongly and bears well.

*Anna* made vigorous growth, but the fruit not ripe yet. In favored locations it is a good grape, but not fit for general cultivation here.

*King*, our earliest black grape, ripe before *Concord*, which it is fully equal if not superior to in quality. Grows vigorously, and bears abundantly; no mildew.

*Delaware*, fruit particularly sweet this season; sustains its general reputation well. Though last, it is the least in size of bunch and berry; in quality of course first.

[We are glad to see the grape reports begin to come in. The reader, by studying them, will gather a good deal of useful information. Would you like to hear from *us* on the *Perkins*? The *Dartmouth* we do not know, but suppose, from the description, that it is a second edition of the *Charter Oak*. *Delaware* is of course best.—*Ed.*]

## A COUPLE OF COTTAGES.

By MEAD &amp; WOODWARD, Architects, etc., 37 Park Row, New York.

WE give this month, by request, two designs for cottages, which, in these high-priced times of lumber and labor, can be erected at a very reasonable figure; and although prepared for farm cottages, they will admit of such changes as will adapt them to the wants of those who require a higher grade of accommodation. It is the most natural thing in the world for any one to take up a plan and suggest innumerable changes and additions, always forgetting the unalterable conditions of price, situation, and object, which restrained the architect while working it up. To prepare a design regardless of expense is a very different matter from devising one that gives the

largest amount of accommodation within a fixed limit of cost. We shall arrive gradually at the precise figures, and endeavor to get the accommodation wanted by some of our readers. In the mean time we shall be very glad to hear that our designs have furnished a suggestion towards the compilation of a plan best suited to their wants.

It has been frequently observed that the gate lodges and farm cottages attached to large estates are generally more attractive in their architectural proportions and beauty than the mansion itself; and this has been usually attributed to the education of the proprietor's tastes, the cottages being the latest erections. This impression is not,

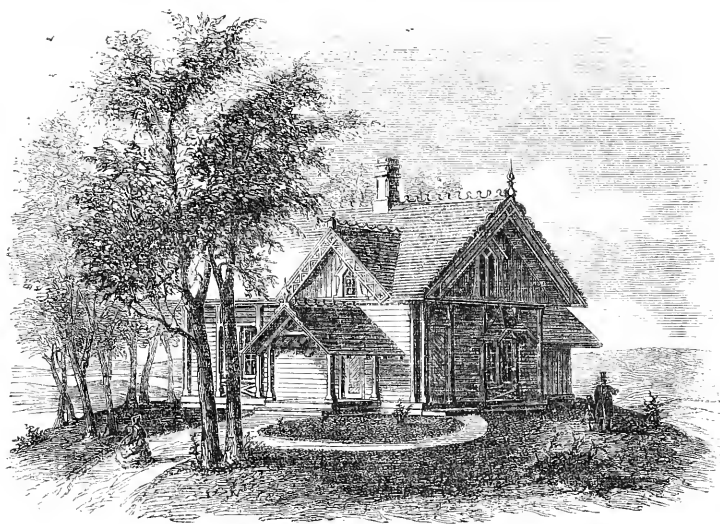


Fig. 48.—Perspective View.

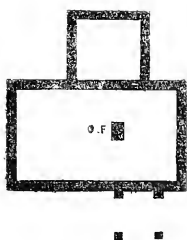


Fig. 49.—Cellar.

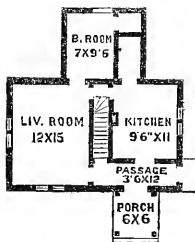


Fig. 50.—First Floor.

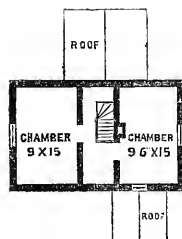


Fig. 51.—Second Flor.

however, always true; for there is a peculiar beauty and attractiveness about cottage architecture which can not be produced in buildings of a larger and more commodious class. Certain it is that a prettily designed cottage will always arrest attention. "Among the first and most pleasing impressions," says a late writer, "of our trite friend, the intelligent foreigner, as he entered England by the old Dover road, were those suggested by the little whitewashed and woodbine cottages which caught his

eye at every turn. All books of travels on English ground are full of them. Snugly sheltered in its bower of apple trees, or more stately group of walnuts, approachable only by its rustic stairs, or dotted at neighborly distances along the straggling village, with its trim garden of lavender and wall flowers, seen through the wicket gate or over the privet hedge, the English cottage, above or below, near or in the distance, was alike the delight and envy of the traveler, the theme of the journalist and the poet.

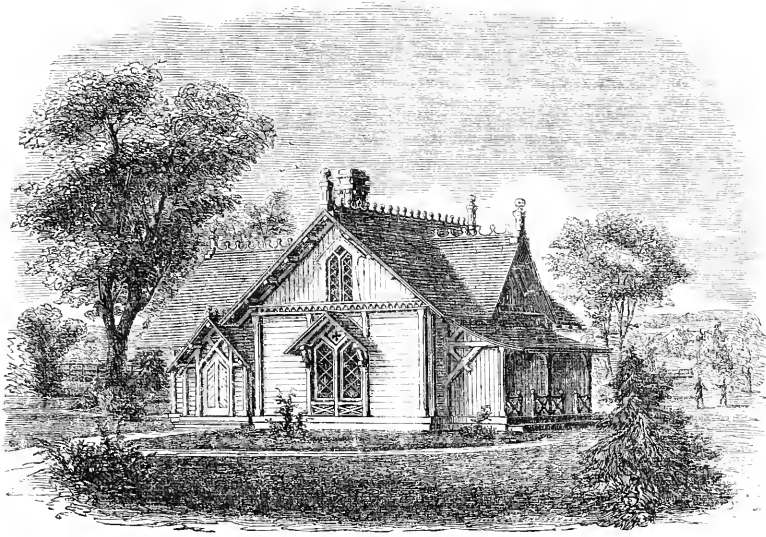


Fig. 52.—Perspective View.

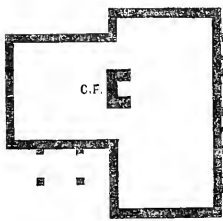


Fig. 53.—Cellar.

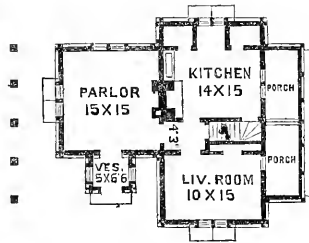


Fig. 54.—First Floor.

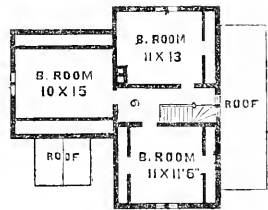


Fig. 55.—Second Floor.

'There is scarce a cottage,' says an American tourist just landed from America and France, 'between Dover and London which a poet might not be happy to live in. I saw a hundred little spots I coveted with quite a heart-ache.' Whether or not Rogers would have given up his picture-lighted snuggerly in St. James' Place for his 'Cot beside the hill,' and really preferred to have his latch lifted by the pilgrim, instead of his knocker by a London footman, it is certain that the cottage homes of Eng-

land that border the main roads have long possessed a beauty far beyond the houses in other lands belonging to classes much higher in the social scale, and have been coveted, sometimes not without reason, by those who could, if they chose, have purchased them fifty times over."

To be more practical, the contract for building complete the first design has been awarded to Mead & Woodward for \$1,000. The second one can be erected for \$1,800, in favorable localities.

## GRAPES IN BERKSHIRE, MASS.

BY WM. BACON, RICHMOND.

MY DEAR MR. MEAD,—It is very instructive to read the reports on Horticultural progress published in your paper, especially the reports on grapes. These are assuming a reliable form, and contain facts interesting and instructive to all who are cultivating that fruit. And who is not now raising a vine? No one is neglecting it, who is regardful of his own comfort and interest and that of his family. It is strange in this age of progress, that any one who has soil enough for the roots to grow in should neglect their culture. Air is cheap; every one can find space to train.

It has long been thought by many, and is now probably the opinion of some, that the grape, especially the finer kinds, can not be made subjects of out of door culture in the high regions of Berkshire. Experience is beginning to teach the utter fallacy of this conclusion. We have soils in the valleys of the Hoosic and Housatonic admirably adapted to the grape. And in our hill towns choice varieties have been successfully ripened at an elevation of 1,200 feet above tide water. Indeed, we often find the higher localities more favorable, on account of freedom from frost.

The past season, up to July, was very poorly adapted to the growth of grapes, or indeed any garden products. So cold and dry a June as that of 1863, has very seldom been known in this region. July 1st, corn gave a poor prospect for a crop, yet it made a good one; so did grapes, as a general thing, as those on exhibition at our Agricultural fairs showed conclusively. Among the varieties so exhibited, we noticed the Delaware, Diana, Hartford Prolific, Concord, and Adirondac. The Delaware has not yet, however, been brought to the perfection here which it attains in many places, yet it is highly prized. The Diana partakes too much of the acid for most palates; so of the Concord, which here is inferior to the Hartford Prolific. The Adirondac is upon trial, and for hardiness promises well. Its flavor has not yet been tested, the vines being too young to be able to say what they will be. Other

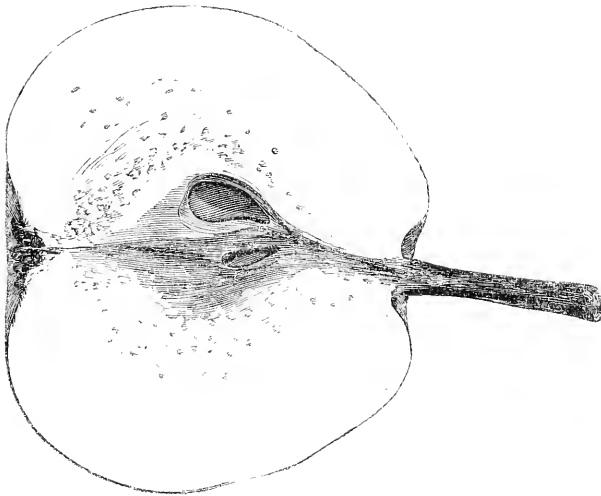
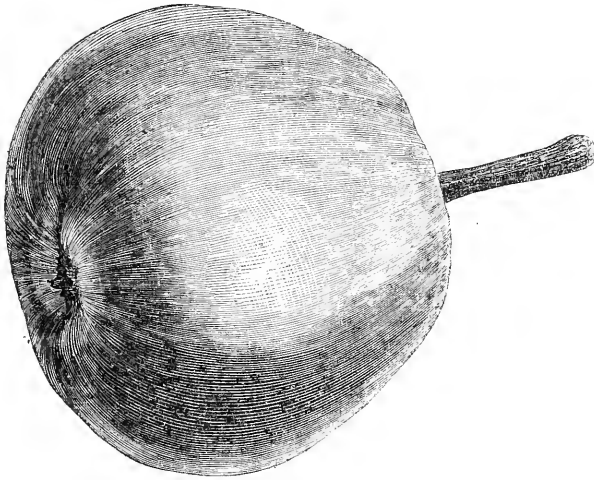
varieties are in course of cultivation, and from some of them we hope to find attractions to call every one to their cultivation.

And here, without insinuating any thing in the form of flattery, permit me to say, that your monthly articles on the vine are doing much towards introducing its cultivation, by the course of unerring certainty you point out for their propagation, culture, and pruning. These Hints have probably been the means of putting out many new vines the past year, of resuscitating many old ones, and introducing a course of successful management with all. Fortunate are all those who have read and appreciate them. Successful all must be who carry out their suggestions. I wish they were much more widely spread, as I value the extension and successful culture of a fruit that nearly all admire, which most can raise, with proper care, and which many can well raise, without excessive labor or care, who now purchase their supplies at prices very profitable to the grower.

[We have watched with much interest the progress of grape culture in New England. It has been slow, but sure. Not many years since a cultivated vine could rarely be found. The introduction of improved hardy and early ripening kinds has effected a change; and this change will go on till the hillsides of New England are festooned with vines. We are glad to hear an encouraging report from old Berkshire. We agree with you in regard to the fallacy that grapes will not grow there. We have only to select the right kinds, and give them proper care. Are you right about the acid of the Diana? One of the characteristics of this grape is to become sweet even before it colors. Thank you for your complimentary notice of our grape articles. We have endeavored to make them useful, and have reason to know that they are doing some good; and this is our reward. We ask for no greater honor than having been instrumental in diffusing correct knowledge of grape culture.—ED.]

## THE HADDINGTON PEAR.

BY THE EDITOR.



This is a Philadelphia pear, and is in season from January till May. It is a winter pear of moderate goodness, and calls for no lengthened description.

*Fruit*, medium, obtuse pyriform. *Skin*,

greenish yellow, with a dull colored cheek. *Calyx*, medium, open, in a shallow basin. *Stalk*, long, rather stout, inserted in a small depression. *Flesh*, yellowish, juicy, slightly aromatic; not melting. *Quality*, good.

## VINEYARDS AND GRAPE CROP IN McLEAN COUNTY, ILLINOIS.

BY DR. H. SCHRÖDER, BLOOMINGTON, ILL.

MR. EDITOR,—The progress in vineyards near Bloomington is a very good one. Since four years, we have started here twelve vineyards, (nearly all offsprings of mine,) from half an acre up to three acres each. Some of them are on the open prairie. Most of them are planted with Catawba; but Concord will be the rule hereafter, on account of the Catawba grape rot. This year our Catawbas were free from every disease or trouble. I have made over 1,100 gallons of wine, and had only a small half crop, on account of raising so many layers from old wood from my bearing vines, and having between the rows strawberries for fruit. This is a bad plan, and I will warn every friend not to go into this practice. I will give you in another article, some time, my experiments and results.

Mr. George Henshaw here made, this year, 150 gallons of Catawba wine from 160 four year old vines; and our wine is good. I made a good deal of Concord wine this fall; also Norton's Virginia, and other new

varieties. You shall have all the particulars hereafter.

[We are glad to hear that vineyards are multiplying among you. There can be no risk in their multiplication, provided you *start right*. We expect, however, to see some of them made over again. It will soon destroy any vine to use it for making layers. Neither strawberries nor any other crop should be grown in the vineyard after the second or third year. We would suggest to you and your neighbors who are planting vineyards, to plant chiefly such kinds as are best, not only for the table, but for making wine. We fear some of you are committing errors in this respect, and it behooves you to give the matter a very serious consideration. If you make wine, it must be wine that will not only keep, but suit a nice public taste; for that we are coming to very fast. We shall do our best to bring that taste up to a high standard. Good light dry wines will be the order of the day.—ED.]

## FENCES.

By MEAD &amp; WOODWARD, Architects, etc., 37 Park Row, New York.

IN spite of all laws to the contrary, cattle will intrude upon one's property, and each and all must at great expense build and maintain fences for their own protection. There has not as yet been devised any practicable mode by which the enormous sums annually spent in fencing might be saved. The theory advanced, that it is cheaper for each to fence his cattle in, than to fence his neighbor's out, has not as yet been practically illustrated, if we except a few suburban localities.

*Fig. 1* is a design a little in advance of the common post and board fence. The

braces are sprung against each other, instead of being halved.

In *Fig. 2* the number of braces are increased. They are halved into each other, and toe-nailed, top and bottom, but are not so strong as *Fig. 1*.

*Fig. 3* is a modification of a picket fence, with a paneled base.

*Fig. 4* is another design similarly arranged on a stone foundation. Gateways are shown in both *Figs. 3* and *4*. This manner admits of an infinite variety of designs, of which we shall give more in future numbers.

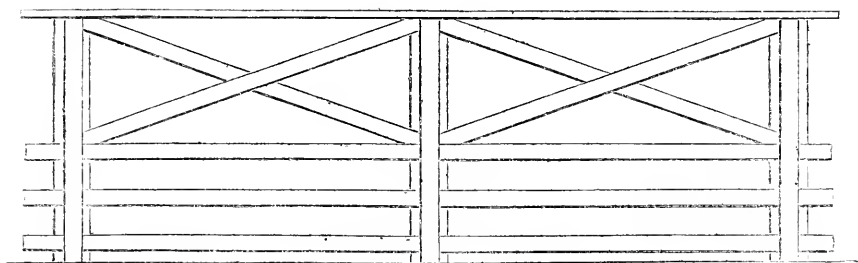


Fig. 1.

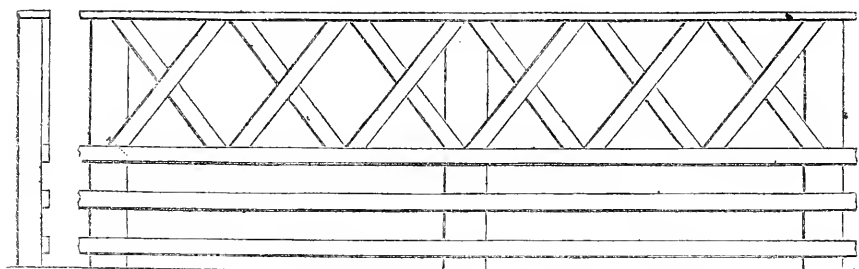


Fig. 2.

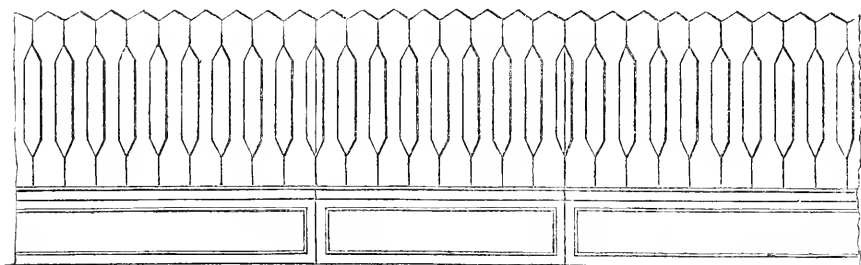


Fig. 3.

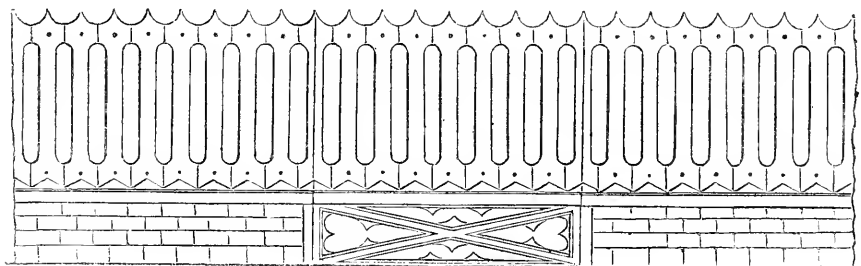
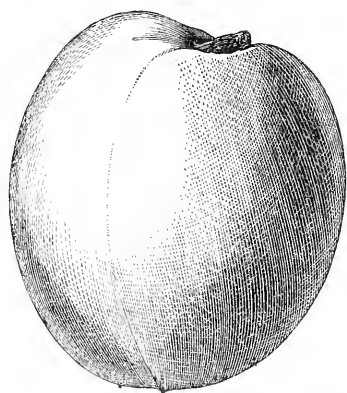


Fig. 4.

## THE DOWNTON NECTARINE.

BY THE EDITOR.



This is not a new fruit, but as many of

our readers have not seen it, we give a portrait taken from a fine specimen sent us last summer by Mr. Pullen, of Hightstown. The Downton is of English origin, having been raised by Mr. Knight, well known for his labors in raising seedling fruit. It ripens in the latter part of August, just after the Violette Hative.

*Fruit*, medium, roundish oval, largest on one side; suture very faint. *Skin*, pale green, nearly covered with dark crimson. *Flesh*, pale green, melting, and rich; reddish around the stone. *Quality*, very good. The leaves have round serratures, and reniform glands.

## WAYSIDE THOUGHTS UPON ARCHITECTURE.—(No. I.)

BY ARTIFICER.

THE materials which will form the basis of the following hints have been mostly gathered during a succession of years, and at such intervals of professional labor as seemed to proclaim them ripe for the harvest, and fit to be received as a substantial record among the useful things in art.

In the year —, I commenced making wayside memoranda of such things in architecture as seemed to invite criticism, or lack in completeness of conception and execution. I did this then more with a view to individual benefit and for future reference, than for any needs I saw they might supply elsewhere in suggesting better methods for poorer ones, and to fill a void in my early education. Having derived much benefit myself, and seen in some cases where these memoranda would have proven sources of profit, I thought fit to offer their results, enlarged and perfected by later every-day experiences, to the readers of the HORTICULTURIST, in connection with the specimens of Rural Architecture it illustrates. I propose to give them in nearly the same unfinished stage of their inception, and without

more effort than will suffice to make them plain; and if they but serve to correct any one of the evils which induced me to make them public, the earnest thought and labor they cost will be amply compensated, and I may add, the degree of favor with which they are received will determine their extent.

PAINTING, employed as a vehicle of use and ornament about our dwellings, deserves greater consideration than is usually given to it. Excessive haste is too often manifested in the selection and use of colors, at the sacrifice of durability and proper effect; whereas a little thoughtfulness, and a few well-directed inquiries would have spared many a one the humiliating sense of incompleteness in their own efforts and work. Accepting this as a fact, I have believed, and do still, that it is not a knowledge of what ought to be done we want, so much as a frequent reminding of our duty toward impressions and materials.

I am sometimes asked, "How would you perform this or that piece of house painting, so as to insure reasonable durability with proper tones of color?" and have answered



in general terms, that it is only required as a first rule to observe what *are* good materials; and, secondly, how they should be applied.

When any are sought, it should be determined first what are best, since the best are cheapest, though double or treble the cost of inferior ones at the outset; because of greater facility in working them, their excellence of finish, and lasting qualities.

WHITE LEAD is used as a base for nearly all the positive and semi-tones in house painting, and is best when *old*, because it is thus rendered softer and finer, and works smoothly under the brush. The unadulterated keglead should be used for good work. Its preparation in detail I will not attempt, but may remark, that it is sometimes prepared by exposing sheet lead to the fumes of vinegar, by which it is corroded, and its surface covered with an incrustation, which being scraped off and levigated, becomes white lead. It is again made by precipitating a solution of acetate of lead by carbonate of soda, consisting of about 112 oxide of lead, and 22 carbonic acid, etc. Semi-tones are compounded from white as a base, and some of the varieties of the other primitive colors, black, red, yellow, blue, green, and brown. Of the four or more varieties of black, lampblack calcined and ground in boiled linseed oil is probably the best for general purposes.

Of the thirteen varieties of red, Carmine and Indian, Chinese and English pale vermilion, Orange Mineral and Prussian Red are most reliable for wood-work, though nearly all the kinds are in use constantly.

Of the several varieties of yellow, Chinese and French Ochre are the best; the former clear, enduring, and of great strength; the latter takes but little oil, and preserves its color well.

Of the blues, Ultramarine, Chinese, Prussian, and Antwerp are the best, being of great strength and easily ground in oil.

Out of the greens, I select Chrome and Paris greens. Both should be ground fine in boiled linseed oil, and used on carefully prepared priming.

All the varieties of brown are quite good,

DECEMBER, 1863.

and freely used in the various branches of house painting and decorating, but chiefly to prepare drabs, and for veining imitations of wood.

In the application of the materials for painting, a hint or two, enjoining the workman to pay due regard to the small things of his craft, will not be out of place, and the practical experience of a most excellent master painter teaches that this is positively necessary to give any thing like a satisfactory result. Brushes and vessels must be kept clean; and no good workman will be without a proper number of these. Pots for colors, cans for oils and turpentine, and tin paint pots, from which the colors are used with the brush. Marble slab and muller for grinding colors, or pigments. Large ground brush, pound brush, half size. Duster, pallet and putty knife, sash-tools, ladders and window-jack. Strong tin cans for using the paint from is better than wooden ones, because easily kept clean and brushed down; paint can not adhere to these so well, and hence less is wasted. Prepare the wood-work for painting by first examining, to see if any roughness of surface is apparent, caused by working against the grain of the wood, or from any other cause; if so, destroy the roughness, and level the irregularities by a liberal use of sand-paper, assorted, and pumice. This should be done before the priming coat of paint is spread, or put on, and not afterward, as is sometimes the case, since the priming aids in forming the body, and is nearly all taken up by the pores of the wood, and consequently would be nearly all removed from the surface in preparing for the after coats of painting.

All wood-work, whether out or indoor, (except it be well worked hard wood,) comes to the painter in a comparatively rough state; the finished surface is either glassy or wooley, mottled or ridgy, according to the direction of the grain, the quality of the wood used, and the manner or way in which the several pieces forming the finish were treated by the workman.

Puttying may always be done after the priming has set or dried, but knotting and

shellacing should be thoroughly done before priming. All spots of sap wood, and those impregnated with pitch, should receive two coats of size to prevent their defects being seen through the finishing coats.

In white painting this precaution is not to be omitted, if we would have a pure white, instead of a dirty yellow. The discoloration of white paint so frequently seen is, however, not due always to the imperfect preparation of the wood, but sometimes white painting is caused to assume a yellow tinge by the withdrawal of light from apartments.

Where fast knots appear they should be covered with two coats of size; if loose or black, should be bored out and plugged. All knots, however, should be avoided on the interior finish of first-class buildings, on account of the difficulty of completely covering them, with even the best care. There seems a difference of opinion as to the number of coats required for plain work in the first painting; but when it is remembered that the priming coat is nearly all taken in by absorp-

tion, it will be seen that not less than three coats will suffice for white, and two coats for neutral tints. For new outside work, this will be found sufficient for about the first four years; after which there will need to be a renewal, since its vitality and power to resist the wear of weather becomes partially destroyed. Inside painting being employed as a vehicle of ornament as much as for the preservation of wood-work, its restoration or renewal is more subject to the rules of taste than any absolute requirement of utility, though, if well done, it would serve all purposes by being renewed or restored every six or eight years.

[This is the beginning of a series of articles which we think will prove both interesting and valuable. "Artificer" we know to be equal to the task he has undertaken. We would suggest to him to hunt over his memoranda for all they contain on the mixing of colors and the production of neutral tints; matters but very little understood, except by a few professional men.—Ed.]

*To be continued.*

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## EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

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THE LAST NUMBER FOR 1863.—The present number closes up our eighteenth volume. We have much reason for gratification in the favor that has been extended to us during the past year. Our subscribers have not only multiplied more than we had reason to expect, but we have received so many letters of approval that we feel greatly encouraged to begin the new year with increased zeal. We hope to begin it with all our old friends around us, and scores of new ones, to gladden and encourage us in what we believe to be a labor of usefulness; for we should not give

the best of our life to the HORTICULTURIST, unless we believed it was a missionary of good in the world. We shall endeavor to make it as good and as useful as our means and ability will permit. We shall not be asking too much in requesting our readers to interest themselves in sending us a good list of new names to begin the year with. We shall continue to illustrate our pages just as far as the matter calls for it, sparing no pains to have the engravings executed in the best possible manner. Engravings are expensive, but they are often invaluable to a quick and

proper conception of a subject. They sometimes save an author a good many words, and the reader some hard study. We shall endeavor to introduce them wherever they can be made useful. With the appliances of the artist and the printer, and the assistance of an able corps of correspondents, we think the *HORTICULTURIST* will be found worthy of an extensive patronage. We hope to be thus much rewarded for our labor of love. And so we close the year with a Merry Christmas to all.

A NEW SQUASH FROM JAPAN.—We are indebted to Mr. James Hogg for specimens of a new Squash, sent from Japan by his brother Thomas. It is of medium size, flat, rugged, and ribbed. The color is a very dark green, with a shade of yellow near the stem. We have tried it baked, and found it dry, and about as good as a Sweet Potato, which in flavor it very much resembles. It also makes a delicious pie. We consider it a decided acquisition. It has a very small hole in the middle, but, singularly enough, there was no seed in it! Now the Japanese are famous for doing a good many singular things; but we are curious to know how they raise seedless squashes. Can Mr. Hogg throw any light on this point?

A POPULAR WORK ON COLORS.—We have lately seen the MS. of a new work on Colors, by Mr. H. A. Graef, of Brooklyn. He has had the work in preparation for many years, and it is now nearly ready for the printers' hands. Its examination has afforded us much gratification. We have long been convinced of the need of a work like this, not only by the general public, but in a special manner by horticulturists. The popular notions of color are crude in the extreme. We think Mr. Graef is well suited, by study and experience, for the preparation of a work of this kind, and wish him abundant success.

THE CLARK RASPBERRY.—We have found this new Raspberry to be quite hardy, and as good as we first described it. It "suckers" very moderately indeed, and is therefore

a good variety for the garden. It bears abundantly, and the fruit is very sweet, with a good flavor. It is about the size of the Antwerp.

NOTICE.—We call the attention of our readers to the terms for 1864, the prices of back volumes, and terms for clubbing with *Hovey's Magazine*, *Gardener's Monthly*, and *Country Gentleman*, as published on the second page of the cover. The *HORTICULTURIST* for 1864 we intend to make the most superbly illustrated volume ever issued from the Horticultural press. It will contain some three hundred finely executed engravings. The subject of grape culture, new fruits and flowers, Horticultural buildings, Rural Architecture, Landscape Gardening, etc., will be thoroughly illustrated. We request that our subscribers will be prompt in renewing their subscriptions, and inducing others to join with them in extending our circulation.

COLEUS GROWN IN MANURE.—An amateur friend received a small plant of *Coleus Verschaffeltii*, on condition that he should grow it according to directions, which consisted in growing it in *pure manure*. This was accordingly done, the pot being kept in a house during the summer, and placed under very favorable conditions for growth. The growth, in fact, was all that could be desired; but the plant soon began to lose color, and it was not long before almost every vestige of variegation was gone. However this may be accounted for, the fact may be accepted that *Coleus Verschaffeltii* loses its variegation when grown in manure. We have noticed the fact before, that variegated plants overstimulated at the roots lose their markings, and we think it is not difficult to account for it. We predicted pretty nearly the result in the present case. The idea was, to grow a plant which should surpass in beauty one grown in our own way by the same party; but you see you didn't do it this time, Isaac, though you have done many things to entitle you to the lasting gratitude of the horticultural community.

## CORRESPONDENCE.

EDITOR HORTICULTURIST,—As you have been kind enough to answer my questions in the HORTICULTURIST thus far, I beg leave to trouble you with one or two more, hoping to receive replies.

I am about to construct a grapery, a portion of which I propose to heat, and use the balance as a cold house. One of your plans meets my views as to size and architectural appearance, and I shall adopt it. What I wish now to ask is about the border. How deep should it be, and what materials should compose it? Those recommended by some writers would be too expensive. Some of my friends who have had experience tell me that sods from my pasture and leaf-mould from my woodland may form a large portion; but what say you?

Another question. Which is the best, an outside or an inside border? I am inclined to the latter, from having closely watched a grapery this season with outside borders, having two rows of vines planted through the center, inside, besides the usual vines next the glass. The house is in its second fruiting season, the vines not covering more than two-thirds of the roof, allowing the center rows considerable light. The vines in the center have produced by far the best fruit; not so large berries, but ripe and fine, and the Hamburgs black in reality, not copper-color, as a majority of these grapes have been this season. Chasselas Musqué, Rose Chasselas, and Rein de Nice also have done well, and ripened fine fruit. Not so the vines in the outside borders. The Hamburgs were badly colored and sour October 7th, three weeks after the others were ripe and gone. I am told that the reason is, the season has been so wet that the outside borders have received more than their due share of moisture, causing mildew, and preventing the ripening of the fruit. Is not this a strong argument in favor of inside borders, where we have perfect control of the roots, and can apply as much or as little moisture as experience

may justify, looking upon a long, cold rain-storm in August with indifference?

H. W. F.

[We are always glad to answer your questions. If the plan alluded to does not suit you, we can make you one that will. In regard to the border, it should be from two and a half to three feet deep, according to the nature of the subsoil. If that is stiff or clayey, it should be three feet deep, and suitably drained. Sods and leaf-mould or muck constitute a large part of all the borders we make, and if you have plenty of these, and sand, you can make a good border. Manure can be forked in when you can get it. The absence of manure, when we could get the other materials, would not deter us a moment from making a border. In regard to your next question, our preferences, after a long experience, are most decidedly in favor of an inside border, especially for a hot grapery. We mean a border which shall occupy the entire interior of the house, without compartments or elevations of any kind. The border, in respect to moisture, (a very important matter,) is entirely under our control, and the vine, in all respects, is placed in a condition to perform its functions in the best manner possible while under artificial restraint. Vines have been grown in this way for eighteen years at least, and with results entirely satisfactory. Every gardener knows that Roses, Bignonias, Passifloras, etc., grow and bloom finely when planted in a border in the green-house, and why should not grape vines? An argument that is good for one is good for the other. It is said that the roots of a vine planted inside of a house will run through to the outside border. This is true; and it is just as true that they will run the other way if walled in, and be all the better for it. It can hardly be said that the roots seek the light in running out; for in a forcing house the outside border is covered two or three feet thick with leaves or coarse manure, and

sometimes a covering of boards in addition. The truth is, the roots of a grape vine love to ramble more than most other roots, but they are by no means impatient of restraint; on the contrary, they are generally benefited by it. The roots of the foreign vine need protection from cold rains and sudden changes of temperature in a climate like ours, and the roof of the house in which the vines are growing affords it in a satisfactory manner. The need of protection is getting to be well understood in England, and hence we find grape growers there planting their vines inside, and protecting their borders with glass frames. The change that has been going on there, in this respect, during the past two or three years, has been very marked, and we think it a very judicious one, as it will insure the ripening of their fruit and wood in spite of cold autumnal rains. We can conceive or no argument against growing vines entirely under glass, that will not hold good against growing any other plant under glass. Shallow and detached borders have failed for obvious reasons; but if you make such a border as we describe, we can promise you abundant success. We never advise a friend to pursue a practice without knowing that its success is beyond all peradventure; but you can nevertheless, if you desire, put your border on the outside. We have given you a few, among many reasons, why we should put it on the inside.—ED.]

EDITOR HORTICULTURIST,—I wish to inquire whether there is any kind of grape of fair quality, which ripens earlier than Hartford Prolific? Being extremely fond of grapes, I wish to get them as early in the season as possible. There are several sorts, which are said to be very early, of which I wish to get some information, viz.: Blood's Black, Black King, North America, Marion, August Coral, Mary Ann, Adirondac. There are also several other kinds which I suppose to be later than these, but wish to inquire whether they ripen as early as the Concord, viz.: Alvey, Raabe, Lydia, and Golden Clinton?

If you, or any of the correspondents of the HORTICULTURIST, would be so kind as to give some information concerning these varieties, it would be gratefully received by your humble questioner, VITIS LABRUSCA.

*Middlesex Co., Mass.,*

[There are few grapes of good quality that ripen quite as early as the Hartford, Black King, North America, and grapes of that stamp, are not worth growing. The Israella we believe to be earlier than the Hartford, and very much superior to it. We think the Creveling is as early, and it is certainly much finer. The Adirondac will also, no doubt, prove to be quite as early as the Hartford, and it, too, is much better. Neither of the grapes you last mention are quite as early as the Concord; some of them are much later. The following, we think, you can safely plant in Middlesex, viz.: Delaware, Iona, Israella, Creveling, and Adirondac. The Concord and Hartford you seem to have already. The others you should have by all means, even if you have to take up the last to make room for them.—ED.]

EDITOR HORTICULTURIST,—Being a subscriber to your valuable journal, I take the liberty to inclose herewith some grape leaves for name. They were purchased for Delawares. Number one, which I find are in a large majority, viz.: in proportion of twenty-four to twenty-five; vine rather strong grower, very short jointed; bunch medium, as above, very loose; berry medium, as above, oval, dark brown; pulp large, tough, and acid; seeds large, from one to three. The nurseryman of whom I ordered it insists upon calling it the Rebecca. It seems to me altogether too foxy to be worthy of cultivation.

Number two, vine, growth slender; not fruited. Number three, vine rather slender; foliage delicate and beautiful, not fruited.

By giving this your attention and answering soon, you will much oblige

Yours truly, E. B. THOMAS.

*Dodge's Corners.*

[Number one is neither Delaware nor Re-

becca. The foliage denotes a wild vine; probably the common summer grape. Number two we take to be Rebecca. Number three looks very much like the Clinton. It is safe to say that you have not got the Delaware.—*Ed.*]

EDITOR HORTICULTURIST,—I inclose four Slugs, (salted.) If they arrive in a bad condition, I trust you will pardon me. I want very much to hear about them.

Within two or three days they have appeared on my squash vines, but mostly on the summer variety, and have nearly destroyed the leaves. The little ones are green, but they soon get this horrid tinge of yellow. The vines are three feet high, with full sized squashes, but can not withstand their ravages. They appear on the leaf and also crawling up the stem. They are easily knocked off, but do not (I think) stay knocked off. I have recently noticed eggs, small yellow ones, on the under side of the leaves, by the side of holes through the leaf. They destroy the leaf just like raspberry slugs.

What are they, and what can we do about it? I always supposed the great *full grown* squash vine was too mighty to care for insects, but it is not so.

Very truly yours, *ÆSTIVALIS.*  
*New Bedford.*

[They came to hand well preserved. They are the larvæ of a spotted squash bug, and most disgusting objects they are. A full-grown vine is no proof against their attacks. A sprinkling of lime will scatter them temporarily. We know of nothing that will kill them except hand-picking. You should go over the vines and destroy the eggs before they are hatched. This we find a simple and sure remedy, and one that takes but little time. Your salt was a good idea.—*Ed.*]

EDITOR HORTICULTURIST,—Can you find a stray corner in which to insert the following inquiries, together with your answer to the same?

I have a three-year old Delaware grape vine. I allowed only two shoots to grow, and pinched the ends of those off when

they were about six feet high, to mature the wood. I wish to train them on the renewal system, with horizontal arms. How much wood should be left for the arms? and how many shoots to an arm?

Will sand, clay, and muck, make a border of sufficient strength without the addition of manure?

What will prevent ants from working around the roots of strawberry vines? They have destroyed quite a number of mine, and I would like to hear of some way that will compel the little pests to make a "change of base."

Respectfully yours, *INQUIRER.*  
*Fulton, Sept. 28, 1863.*

[This year leave two feet on each cane for arms, and extend them two feet more next year. You should not have more than four shoots on each arm. We shall have described the process in our "Hints" before you reach this point. You can effect the "change of base" by using sulphur. Lyon's Magnetic Powder will scatter them speedily, but it is a little costly. Sand, clay, and muck will do. Mix them thoroughly. Manure can be forked in at any time.—*Ed.*]

EDITOR HORTICULTURIST,—I would like to know, through the HORTICULTURIST, if the arm of a grape-vine should be so laid in the border as to strike root as well as cane, and then buried some six inches deep, would not this method fill the border more perfectly with fibrous roots, and would there be any harm in allowing the attachment between each and the mother vine to remain? The vine could be curved just above ground before it is vertically attached to the trellis, so as to retain the advantage of that part of your system, and which would admit their bending to their winter covering the more readily. This is for outdoor culture. If you will please answer the above, you will very much oblige your subscriber,

*A. WILLIAMS.*  
*Hillsdale, Oct. 26th, 1863.*

[The arm can be bedded in this way, but the result is to produce a rampant wood

growth, which is inconsistent with the production of the most and best fruit. Our advice to you is, not to do it.—Ed.]

EDITOR HORTICULTURIST,—I hadn't the least idea that you intended to publish a *book* on Native Grape Culture, as intimated in your August number, and I now write to ask you to reconsider your resolution, if you are really in earnest. You will do me a serious injury; for I tell *you* confidentially that I have been engaged for several months in making up a work on this subject from various authors, and intended to make honorable mention of the HORTICULTURIST and Patent Office Reports for several valuable suggestions. Indeed, I find that your "Hints" are not quite sufficiently connected for me to put this and that together as well as I would like to in "book form." Now, Mr. Editor, please go on with your "Hints," so that I can get my book to *press* this fall. There is a great call for such a work, and my opinion is that it will sell well. I can get it puffed in the papers by sending complimentary copies. You see I am posted. I am willing to refer to you in a handsome manner in my book, and wouldn't mind sending a basket of at least five pounds of grapes "of my own raising" every fall for your interest in the matter; I wouldn't mind making it eight pounds, or even ten, as grapes are no object with me. I don't wish to take any *mean advantage*. You know if I get my book out first, that I can charge you with plagiarism for every idea which you may adopt from my book, and that it will be of no use for you to assert that you originally published the same in the HORTICULTURIST, which I am told is rather an obscure publication, after all; never read in Wall Street; and if I am provoked to say it, I may yet show you up in a prominent part of my book. But you see that I have some delicacy of feeling, and I am willing to do the *fair thing*, as stated above, provided that you will furnish the "Hints" to make the subjects connect. Let me take the credit of the authorship, and give my book a favorable editorial notice in your magazine. In return for which, I will make honorable men-

tion of your journal and its highly talented author, and recommend its circulation among my friends.

P. S.—Don't publish this, as it is strictly confidential; but reply promptly.

[We thought the best thing we could do with you would be to hand you over to the printer, and let him do with you as he pleased. We suspect you will make a botch of the work you have in hand, and you had better let it alone for that and other reasons which ought to suggest themselves, or you may get the "links" in a manner you have not provided for. We shall make the book notwithstanding, but it will not be in the least like yours.—Ed.]

EDITOR HORTICULTURIST,—In your remarks on "The New York Grape Show," in the November number, speaking of the prize "for the best five bunches of native grapes of any kind, quality to rule," which was awarded to me for the Adirondac, I think your remarks are calculated to prejudice public opinion against the Adirondac unjustly, inasmuch as you did not say that Mr. Downing was in a minority of one to four on the committee. Not wishing in the least to reflect on Mr. Downing's opinion, which I concede is entitled to high respect, nor your own, (but I agree with you that tastes differ,) yet the opinion of the other four members of the committee (whose qualifications as judges of the quality of grapes, I think will not be questioned) are entitled to equal respect as that of the respected Chairman, or your own. But there is another fact that may fairly go to your readers, in connection with your opinion, so strongly expressed. At the same time this exhibition took place in New York, an exhibition of grapes and native wines was in progress in Cleveland, and was not, I think, inferior to that held in New York. At that exhibition the first prize "for the largest and best bunch of native grapes, of any kind," was awarded to me for the Adirondac, and the second prize was given for the Catawba. The judges were Dr. Kirtland and Mr. McIntosh, of Cleveland, and Mr. Lyon, of Michigan, all of whom are

gentlemen eminently qualified for judges. Of this award the editor of the *Ohio Farmer* says, in his remarks on the occasion :

"The 'Adirondac' grape was here from J. W. Bailey, Plattsburgh, New York. Mr. Elliot, of Cleveland, who acts as agent, says that the bunches were not as large as those shown at the Pomological Convention last fall in Boston, but they were better colored ; that the bunches then shown must have been gathered two weeks earlier, and were not as high colored as these, nor the flavor as good. As now shown, the berries were bright shining black, and we call the flavor the very best of any grape in the room. Mr. Elliot tells us that Mr. Bailey wrote him that these were gathered from a young vine, and after the best bunches on even that vine had been gathered for other exhibitions. The committee made this the premium grape, and we coincide in their judgment. Here let us also say that probably no better committee could have been made up in the United States. Mr. Lyon and Prof. Kirtland, both men acquainted with grapes, and both amateur growers, while Mr. McIntosh is an old nurseryman, with twenty odd years acquaintance with fruit, but now a nurseryman no longer, having sold out to his sons. No one of the committee, therefore, could possibly be accused of 'having an axe to grind.'"

I think it only fair that all the facts shall appear. I do not propose to add any thing myself, as I may be regarded as an interested party, except that all I claimed in regard to the excellence of the Adirondac three years ago, has been sustained by seven out of eight of the judges on the committees of the two great grape exhibitions of the season.

I am very respectfully yours,

JOHN W. BAILEY.

*Plattsburgh, N. Y., Nov. 12, 1863.*

[Your article came to hand so late that we have only been able to insert it by displacing another on the New York Show, by Fox Meadow. Our remarks were not in the least intended to prejudice the Adirondac, and we should be sorry if they had any such effect.

We will say, in the first place, that you can not value Mr. Downing's opinion too highly on native grapes ; our own will pass for what it is worth in the horticultural community. You are mistaken in saying that Mr. Downing was in a minority of four. As you allude to the decision at Cleveland, we propose to state some things that you have overlooked.

We had intended to publish the list of prizes awarded at the Cleveland show, but could not make room for it this month. The decisions at Cleveland and New York are by no means parallel. The prize at Cleveland was for the "largest and best bunch of native grapes," for which there were only two entries, the Catawba and Adirondac. The prize was given to the Adirondac ; but the judges add to their decision the remark, that the award would have been reversed "but for the unripened state of the bunch of Catawba, while the Adirondac entered against it was perfectly mature and of excellent quality." This is all fair enough. At Cleveland the prize was for the largest and best bunch, and the judges were confined to the entries under that head ; at New York it was for the best grape without regard to size, and the judges had the whole exhibition from which to select it, no matter under what head it had been entered. It seems to us there is a wide difference between the two cases. At the Cleveland exhibition, too, the lot containing the Isabella and Catawba took the first prize under the head, "quality to rule ;" yet nobody at this day believes either the Isabella or the Catawba to be our best grape. The inference is, that better kinds were not exhibited under that head, exhibitors preferring to enter in other classes. Nobody can regret more than we do that the remarks in our last number should have been called for ; but it seemed to be clearly our duty to make them. We must repeat, however, that they were not intended to prejudice any body against the Adirondac. And we wish to say to you directly, Mr. Bailey, that so far from wishing to disparage the Adirondac, we shall cheerfully help you to disseminate it.—Ed.]













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